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Volume 2 (New Series) 1991

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ANNUAL ARCHAEOLOGICAL REPORT, ONTARIO

Volume 2 (New Series) 1991

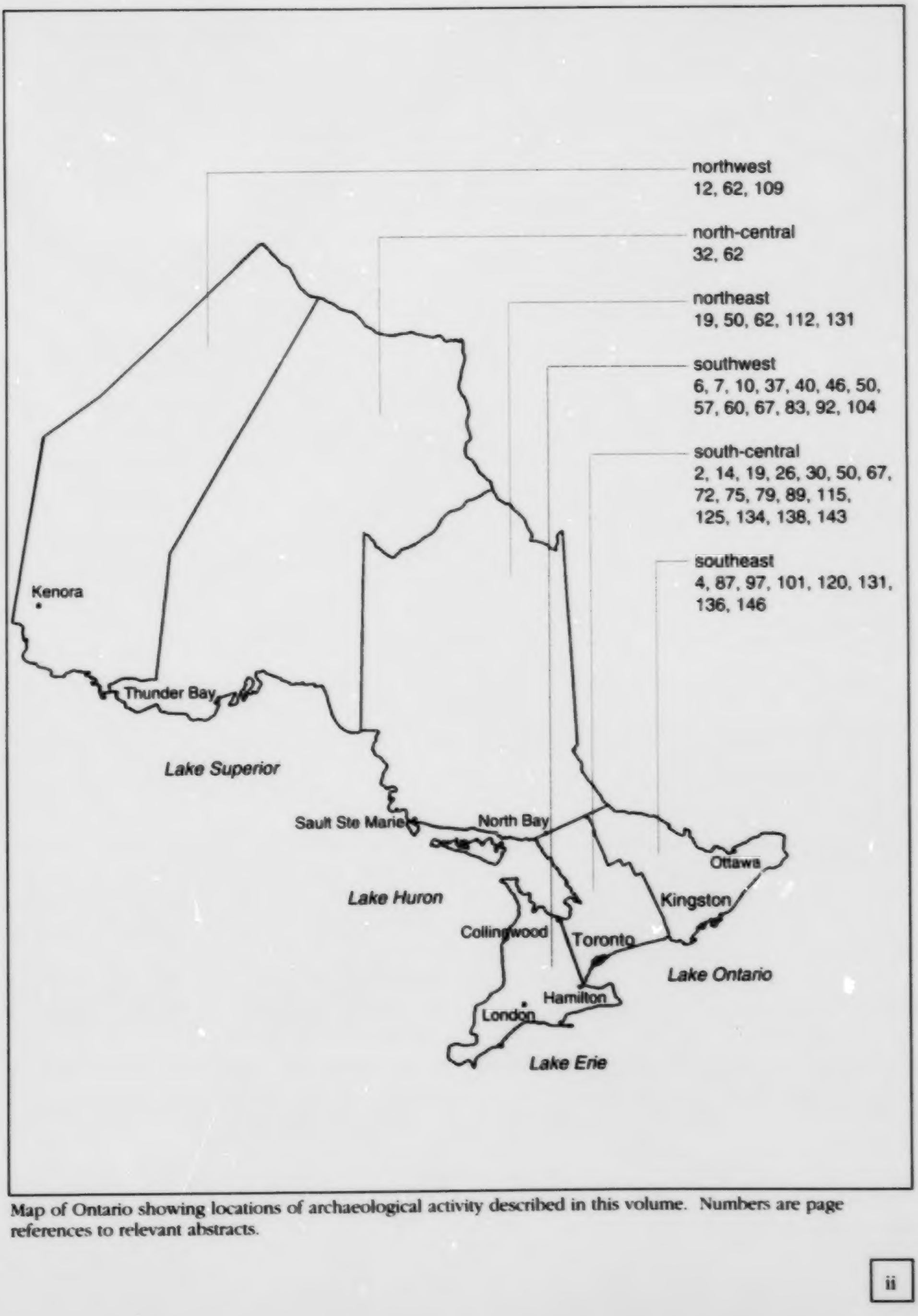
Peter L. Storck
Editor

The objective of the New Series of the *Annual Archaeological Report, Ontario,* is to provide a publication outlet for individuals wishing to publish short abstracts describing the results of archaeological fieldwork conducted in the province of Ontario and licensed by the Minister of Culture and Communications.

These abstracts will be of interest to those members of the general public who want to learn about the prehistoric and historic record of Ontario and will be a valuable reference tool to archaeologists as well as specialists in many other professions.

The Ontario Heritage Foundation seeks to preserve, protect, and promote Ontario's archaeological, architectural, cultural, historical, and natural heritage for the benefit and enjoyment of present and future generations of Canadians.

A non-profit agency of the Ontario Ministry of Culture and Communications, The Ontario Heritage Foundation was established by the Province of Ontario in 1968 and operates under the Ontario Heritage Act.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Map of Ontario showing locations of archaeological activity described in this volume. Numbers are page references to relevant abstracts.

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FROM THE EDITOR

This is the second volume in the New Series, *Annual Archaeological Report, Ontario* (AARO). This volume contains reports on archaeological work conducted in Ontario in 1990. For that year a total of 113 licences and two permits authorizing archaeological fieldwork were issued by the Minister of Culture and Communications on the recommendation of The Ontario Heritage Foundation's Archaeology Committee. Licensees are listed in an index at the back of this volume. Ninety-three licensees went on to conduct fieldwork, and thirty-seven submitted project descriptions for publication. As a result, this volume reports on roughly 40 per cent of projects conducted in 1990 in Ontario, an encouraging increase from the first volume of this New Series of AARO: a 17 per cent response rate for 1987, 16 per cent for 1988, and 24 per cent for 1989. We hope this trend continues so that future volumes will be even more representative of the annual growth of knowledge of the prehistory and history of Ontario.

Volume 2 has expanded in another way. A new section, a bibliography of peer-reviewed articles and books, theses and dissertations, based on archaeological material from Ontario, was compiled from references sent in by contributors and supplemented by an editorial review of several regional and national journals. Though probably not all inclusive, this bibliography identifies recent research that has been developed beyond the initial reporting phase. This bibliography, and those in future issues of the AARO, should be invaluable for tracking archaeological research as it passes from the fieldwork phase into the mainstream of archaeological thought and debate.

Peter L. Storck

ARCHAEOLOGICAL REPORT 1991

CONSERVATION ACTIVITIES

ARCHAEOLOGICAL INVESTIGATIONS ALONG THE NOTTAWASAGA RIVER, WASAGA BEACH, 1974–90

Philip Cooke

In the fall of 1990 the writer compiled data obtained by site monitoring along the Nottawasaga River for the period 1974–90. Previously, Thor Conway (1973, 1975a and 1975b) and Roberta O'Brien (1975) conducted archaeological surveys in Wasaga Beach. Following these surveys, Philip Cooke continued to monitor sites reported by Conway and O'Brien and recorded ten previously unknown sites along the Nottawasaga. In the spring of 1990, William Fox of the Ministry of Culture and Communications, Heritage Branch, indicated that there was a need for more detailed information on known sites, particularly on their cultural affiliation.

With the unique sandy soil conditions that exist in the Wasaga Beach area and the constant weathering that exposes artifacts, excavation has not been necessary on any of the reported sites to determine cultural affiliation. Limited salvage excavations have occasionally been performed, but always in the wake of severe erosion or development. Preliminary artifact analysis has been completed, providing data on cultural affinity of these sites. Of the ten sites listed, there is one possible Archaic period site, four Middle Woodland sites, and one Middle Woodland burial. Four Late Woodland sites have also been identified.

The Middle Woodland period burial was salvage-excavated in July 1988 by James Hunter of Archaeological Research Associates. The recovery of the skeletal remains was performed under adverse conditions. Originally located on a sand dune high above the Nottawasaga River, the burial had naturally eroded some distance down the steep slope. A report on the Wasaga burial may be found in the appendix to Philip Cooke's 1990 archaeological licence report to the Ministry of Culture and Communications.

In addition to the ten sites discussed above, four other sites were also investigated in 1990 by surface collecting following site disturbance/destruction.

All of the fourteen sites investigated have suffered some damage, either by natural erosion or by human activity. Recommendations promoting the preservation of all archaeological sites located within provincial park boundaries have been submitted to park superintendent, Brian C. Huis.

---

66 54 Street, Wasaga Beach, Ontario, L0L 2P0
Conservation Licence 90-113

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CONSERVATION AND SURVEY IN RENFREW COUNTY

David Croft

In 1990 ten properties were inspected for the purpose of recording heritage resources. At the Champlain Trail Museum in Pembroke the excavation of a parking lot and underground services ditch was monitored for archaeological material. Survey work was also conducted in Stafford, Bromley, and Westmeath townships, where four residential lots, with large vegetable gardens, were shovel-tested. Three farms were extensively surface-surveyed in Stafford Township, two of which had freshly ploughed areas. One field, which had produced a stone projectile point found by the owner several years earlier, was examined with negative results. The location of another findspot of a stone projectile point near Barry's Bay, Sherwood Township, was investigated with members of the Ottawa Chapter of the Ontario Archaeological Society who had been invited to the site by the property owner.

The two artifacts mentioned above were measured and reported in the 1990 licence report to the Ministry of Culture and Communications.

Four gravel pits on the above properties in Stafford Township exposed *Macoma balthica* shells, which formerly lived in near-shore environments of the Champlain Sea (Harington, personal communication). Three recently ploughed fields above the pit with the highest elevation were walked and inspected in a methodical manner without discovering any cultural materials. At the time of the fieldwork the fields around the other gravel pits were unploughed and could not be investigated. Mammal remains mixed with sea shells, kicked out of a rodent burrow, were collected near one gravel pit but were found to be from farm animals.

Verbal reports of lithic material collected early in the twentieth century are being investigated in an attempt to locate persons who might have knowledge of the artifacts or site locations.

The Dewal site (BjGf-2) (Croft 1986), the location of a minor quantity of lithic material and a depression representing a pioneer house cellar, was discovered in 1990 to have been graded and built over.

Funding for the fieldwork described above was provided by volunteers, notably Helen and Tim Armstrong who as-

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1127 Boundary Road, Pembroke, Ontario, K8A 7T9
Conservation and Survey Licence 90-035

sisted in work at Barry's Bay. The research is expected to continue in 1991.

REFERENCE

Croft, David J.A. 1986. "Archaeological Conservation and Survey in Renfrew County." Manuscript on file, Ontario Heritage Foundation, Ministry of Culture and Communications, Toronto

MONITORING ACTIVITY AT ROCKWOOD ACADEMY, ROCKWOOD

Dena Doroszenko

Doroszenko undertook monitoring at the Rockwood Academy, located on Highway 7 in the Township of Eramosa, County of Wellington, one mile from the Village of Rockwood.

The site was originally part of a 200-acre land grant, fifty acres of which were purchased by Quaker John Harris in 1820. Harris raised a frame house on the site in 1830 and in 1840 donated three acres of land to the Society of Friends for their meeting-house and cemetery.

In 1850 William Wetherald established the first Rockwood Academy in a log building on the site. He built the main limestone block of the present academy in 1853–4.

Rockwood Academy was one of a number of private and religious schools established in Upper Canada between 1830 and 1850 because of a lack of confidence in established forms of government-subsidized education. Rockwood Academy was a well-known institution in Canada West from its opening in 1854 until its closure in 1882. The academy building was used briefly as a knitting mill after its closure. The building and property were sold to the Gordon family, who used it continuously as a farm and residence from 1900 to 1960, at which time the building and a 2-acre parcel were sold to Joseph Drenters. Drenters restored and renovated the building, partly with financial assistance from The Ontario Heritage Foundation. The OHF obtained an easement on the academy and grounds in 1977. Drenters bequeathed the property to the OHF in 1983, with his brother, Andreas, as life tenant.

In August 1990, Andreas Drenters experienced water problems and needed to excavate the well. Curiously, the exact location of the well was not recorded on any of the documentation held by Drenters or the OHF. Oral history related that the well was located on the north side of the academy building somewhere along the pathway. Drenters had this area excavated by machine while Doroszenko monitored the work to record any undisturbed archaeological resources that might be found. It became apparent that during Joseph Drenters's restoration work the area on the north side of the building had been disturbed, and no *in situ* remains were found.

The Ontario Heritage Foundation, 10 Adelaide Street East, Toronto, Ontario, M5C 1J3
Conservation Licence 90-083

BRUCE PENINSULA SURVEY, YEAR VI

William A. Fox

The 1990 field season witnessed a wide spectrum of survey activities over a period of nine days during the months of June, July, and August. An additional two days were allocated to Niagara Encampment Commission planning staff tours of Bruce County archaeological sites, including the major seventeenth-century Odawa encampment at Hunter's Point (J. Molnar, infra). Two days in July were spent by the writer assisting James Molnar in the survey of this site.

Six new campsites and two diagnostic artifact findspots were registered, while three previously registered camps were monitored in Bruce and Grey counties. One major accomplishment was the rediscovery (after several attempts) of the exact location where Sherri Plewes and Mary-Lou LePain had found an intact Sidey Notched ceramic vessel (BhHj-31) (Fox 1990a). The two discoverers and the writer were transported by boat along the rugged Little Cove shoreline on 8 July by Stan McClellan and Ken Johnson of the Canadian Parks Service. Their assistance was critical to the relocation of the vessel findspot. A single body sherd was found in a shallow duff depression under a large, perched limestone block. The vessel appears simply to have been cached a short distance into the forest from the exposed bedrock shoreline and was not associated with a campsite or burial.

A short time later in July, the writer accompanied Blake Smith of the Ontario Ministry of Natural Resources to the shoreline location in Sarawak Township, where Smith had discovered a stone axe. Investigation of the findspot vicinity suggested that this Archaic artifact had derived from a site destroyed by recent wave erosion, which had created a steep clay bank. This bank is situated just below and east of the Nipissing strandline, suggesting that the axe could be contemporary with the subsequent Algoma Lake stage (c.1300 BC).

The most dramatic discovery of the season again relates to the Archaic occupation of the Bruce Peninsula. A visit to a Nipissing stage island at the north end of Rankin Bay (figure 1) produced limited evidence, including a notched biface of Amabel Formation Bruce chert, from what appears to be a third millennium BC

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Conservation Licence 90-101

campsite. Field conditions were poor and a more productive inspection is expected during the spring of 1991. Just to the west, a post-Nipissing campsite was discovered on a ridge adjacent to the outlet of Sky Lake. A small lithic assemblage, which may be of Inverhuron Archaic provenance, was recovered.

The most innovative survey involved a 25 August dive off Bad Neighbour shoal. Members of the Ontario Marine Heritage Committee were transported aboard the *Arcturus*, courtesy of Captain Albert Smith, and with the writer conducted the first reconnaissance of the eighth millennium BC Stanley-Hough low-water stage landscape between the Bruce Peninsula and Manitoulin Island. While no Early Archaic remains were discovered, much was learned about bottom visibility and sediment deposit patterns.

Additional fieldwork focused on Late Woodland occupation sites and included a trip to McKay's Harbour, east of Lion's Head, and an initial reconnaissance of the Meaford Tank Range lands in Grey County.

The McKay's Harbour survey produced evidence of a small campsite (BgHh-3) and an isolated, water-rolled basalt retouched spall tool. Paul Antone of the Department of Communications and the writer met with Captain Stu Syme at the Meaford Canadian Forces Training Area on 26 August. A day of fieldwork resulted in the registration of three Native campsites, including a seventeenth-century Odawa site at the mouth of Sucker Creek (Fox 1990b). Additional discoveries included a nineteenth-century log cabin and numerous artillery shells. At the request of the base commander, all archaeological recoveries were left with Captain Syme at Meaford. Further survey of the base lands will almost surely result in the discovery of numerous prehistoric Native campsites, some contemporary with the Algoma and Nipissing strandlines; consequently, it is hoped that the Department of National Defence will initiate a full and intensive archaeological survey prior to any further planning for development of the Meaford training area property.

ACKNOWLEDGEMENTS

The writer wishes to thank the following people for volunteering their time in support of the field activities described above: Art Amos, Paul Antone, Theresa Bowman, Jeff and Joy Buckingham, Jeff Bursey, Andrew Calverley, Ken Johnson, Victor Last, Mary-Lou LePain, Stan McClellan, James Molnar, Sherri Plewes, Paul Riley, Blake Smith, and John Veber.

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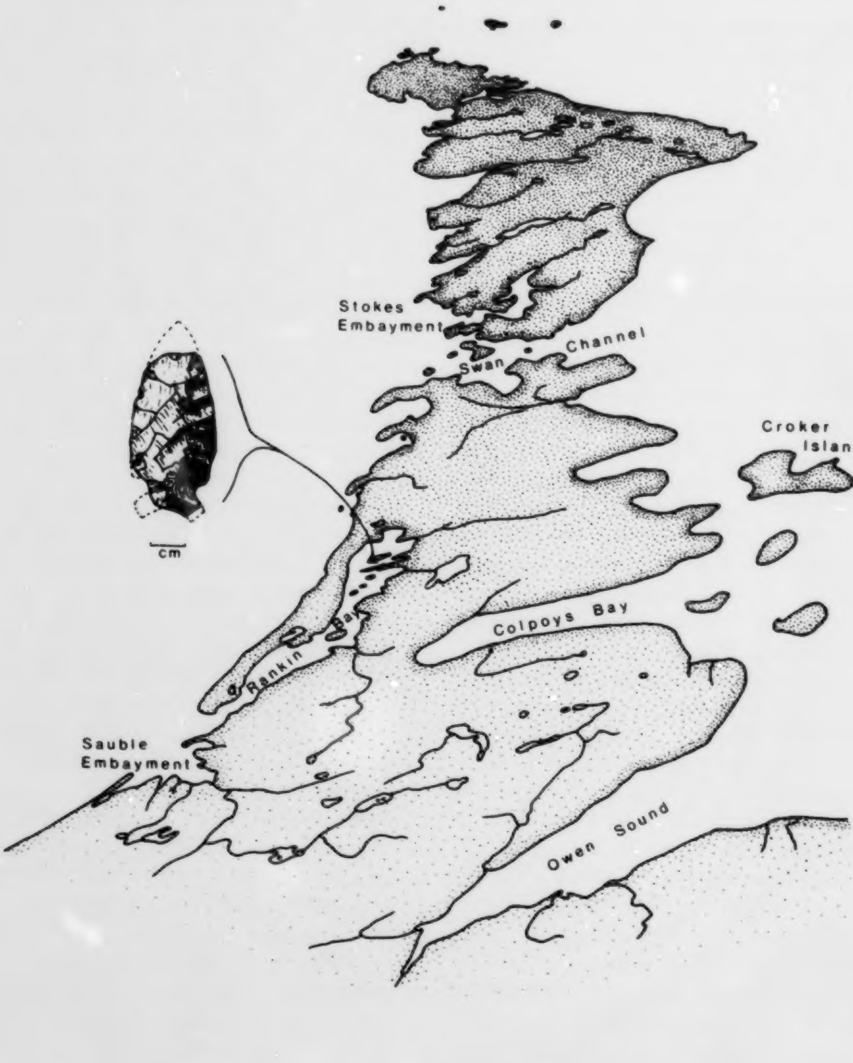
Stokes Embayment
Swan Channel
Croker Island
cm
Colpoys Bay
Rankin Bay
Sauble Embayment
Owen Sound

Figure 1: An eagle's-eye view of the Bruce Peninsula some 4500 years ago, during the Nipissing high-water stage in the Lake Huron basin (geography based on a lake level approximately 14 metres above the present)

MONITORING EXISTING SITES AND SURVEYING FOR NEW SITES: ANCASTER AND BRANTFORD TOWNSHIPS

A.F. Howey

Arthur Howey continued to monitor registered sites in the townships of Ancaster and Brantford. He approached land owners, asked them for information they might have about potential sites, and surveyed prospective sites. He also met with personnel of Archaeological Services Inc. (ASI) to provide information and to lend artifacts from a number of sites within the Clover Leaf Village Development in Ancaster Township.

The *Seeley* site (AgHa-4), now owned by Circle Square Ranch of the Ministry of Crossroads Christian Communications Inc., was monitored and found to have been visited by "pot hunters." However, the ossuary area was undisturbed and a number of nearby artifacts were collected. Human bone on the surface was collected and reburied at the edge of the ossuary. The ploughed portion of the site has been planted in hay and should be undisturbed for years. Personnel of the Ministry of Culture and Communications were informed of the status of this site.

The *Springbrook* 1 (AhGx-110) and 2 (AhGx-111) sites were monitored after Archaeological Services Inc. surveyed them and excavated the north portion of Springbrook 1. The latter site (producing both Archaic and Woodland material) extends onto the property of Redeemer College and will continue to be monitored. Artifacts found during monitoring work were shown to ASI and will be described in the report on their fieldwork.

The 30 acres cultivated on the *Redeemer College* property contain the following sites: Redeemer College (AhGx-115), a Middle Woodland hamlet; Whaley 1 (AhGx-115), an Archaic site with possibly a Woodland component; and Whaley 2 (AhGx-116) and Whaley 3 (AhGx-117), both Archaic sites. The Whaley 3 site is especially interesting since the chert used to make most of the artifacts is quite different from that seen on most other sites in the area. This chert is white and crystalline, with black, pepper-like inclusions. It is similar to Fossil Hill Formation chert described by Eley and von Bitter (1989). The orchard portion of the Redeemer College property is reported to contain both a pioneer home burned during the war of 1812 and a pioneer blacksmith shop. Enough artifacts have been found under the sod

RR 1, Brantford, Ontario, N3T 5L4
Conservation Licence 90-047

to confirm some historic human activity. Deep ploughing is obliterating the hearths and middens. The college has no plans to expand its campus or develop the land on which these sites are located.

The *Elliot-Kuhn* site (AgHa-48), located in Brantford Township, is a Woodland hamlet on a tributary of Big Creek. It has been known to local collectors for many years and the current owner is restricting access. This site appears to have been occupied prehistorically for a long period of time, since the dark black soil in the occupation area is over 10 inches deep. The site and the middens appear to be undisturbed except for the agricultural activity which, fortunately, does not involve deep ploughing. There are three interesting occupation areas outside the main area of the site, and, based on artifacts found, all four areas are apparently related.

Sarabura 1 (AhHa-138), which appears to be a late Woodland site, and *Sarabura* 2 (AhHa-139), an Archaic site, were brought to my attention by T. Elliot. Both sites are in Brantford Township. *Sarabura* 2 is on a plateau overlooking Big Creek; it has not been cultivated for several years, yet is easily distinguished from the surrounding area by the soil colour. These sites were not visited until late in the season and a limited artifact sample was obtained by surface survey on uncultivated ground. Mr Sarabura, the owner, has found artifacts on other parts of his property and a more extensive survey is planned for 1991. These sites are not currently threatened.

A number of other surveys were carried out in 1990; some locations produced nothing, while others require more work before they can be registered.

On a visit to the Eva Brook Donley Museum in Simcoe, Ontario, the writer identified several distinctive Paleoindian artifacts in a collection recently donated to the museum. These artifacts have been brought to the attention of several scholars interested in Paleoindian material.

REFERENCE

Eley, Betty E., and Peter H. von Bitter. 1989. *Cherts of Southern Ontario.* Toronto: Royal Ontario Museum

ADDITIONAL PETROFORM DISCOVERIES, NORTHWESTERN ONTARIO

Robert Hugh McNally

McNally conducted a mid summer to late fall survey for the purpose of locating and recording petroform sites. The primary survey area was within the region bounded by the Ontario/Manitoba border to the west, Lake of the Woods to the south, and the Winnipeg River to the east and north. Potential site locations occurring along possible prehistoric waterways that may have been used during subsistence activities were given priority for investigation. The project was funded by a grant from The Ontario Heritage Foundation.

Thirteen potential site locations were identified for investigation. Twelve of these were surveyed, resulting in the discovery and recording at five locations of thirteen petroforms and nine possible petroforms (Gauntlet Lake, Canoe Lake, Greenwater Lake, Victoria Lake, and Duck Lake). At a sixth location on the west shore of North Scot Lake, a previously unrecorded pictograph measuring approximately 2.0 by 3.2 metres was located and recorded.

Four additional sites not originally selected for fieldwork were also surveyed. The first site to be explored was the only one outside the project survey area. It is located at "Three Finger Lake" (a name assigned by area Natives) and, according to an Islington Reserve informant, was the location of possible pictographs. These paintings were not located, but a second trip was necessary to record two petroforms and one additional possible petroform that were discovered on the first trip.

The second site, located between Roughrock Lake and Little Sand Lake on the Winnipeg River, was surveyed as a possible pictograph site. No pictographs were located, but seven petroforms were identified and recorded. A third potential petroform site was identified at Adamson Lake between two channels of the Winnipeg River. Exploration of this location resulted in the discovery and recording of three petroforms and three possible petroforms.

The fourth site to be investigated was identified by informant Eric Sodderman, who reported a petroform on a ridge a few hundred metres north of his home at Middle Lake. McNally recorded this feature by remote sensing with an

Box 7, Lot 112, Sand Lake Road, Minaki, Ontario, P0X 1J0
Surface Collecting Licence 90-003

improved version of the Photogrammetric Grid Apparatus used in 1989 at the Jadel Lake, Ontario, Petroform Complex. Four additional petroforms were also recorded at Middle Lake. A limited survey of the area revealed fifteen additional possible petroforms, raising the prospect that the Middle Lake location may contain the most significant petroform complex found in Ontario to date. Of all the sites surveyed, however, it is the most threatened by current human activity, and safeguards must be developed to maintain its present integrity.

During the 1990 phase of the project, a total of nine petroform site locations containing thirty definite petroforms and twenty-nine possible petroforms was discovered. Most of these petroforms may have been constructed between 1000 and possibly as early as 2500 BP, as has been suggested for some Manitoba petroforms (Steinbring 1983, 5, 45). However, a few may be younger, possibly relating to "vision quest" activity as postulated by Chief McDonald (personal communication, 1987).

The balance of the petroform research project will involve the exploration of additional locations in 1991 selected on the basis of 1990 project results. Information on site locations will be related to hypotheses concerning subsistence activities in order to determine when the petroforms may have been built during the seasonal cycle. Ongoing laboratory activities include the development of a computer petroform mapping technique based on photogrammetric remote-sensing information obtained during field recordings.

REFERENCE

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FORT YORK ARCHAEOLOGY PROJECT: 1990

Catherine Webb

During the summer of 1990, the Toronto Historical Board conducted a season of archaeological fieldwork at Historic Fort York, a late eighteenth- to nineteenth-century British military garrison (Webb 1991b). The sixteen-week project, under the direction of Catherine Webb, was funded by the City of Toronto. The archaeological staff and crew consisted of fifteen people. Laboratory and conservation work was conducted simultaneously with excavation at the site.

Toronto was founded in 1791 when Lieutenant-Governor John Graves Simcoe built Fort York. In the years following 1793, military buildings were constructed on the site. A dearth of military maps outlining the location of these early structures has presented a problem to archaeologists in mapping the site. During and following the Battle of York on 27 April 1813, the majority of buildings at the fort were destroyed. Rebuilding took place in 1813–15. The buildings now extant date to this period and represent seven of the eight oldest buildings in Toronto. Because of early and long-term efforts to preserve the site, Fort York is one of the least disturbed late eighteenth/nineteenth-century archaeological resources in Toronto.

Because the extant buildings at the fort were deteriorating rapidly, a restoration project was undertaken in 1987. This necessary work involves installing new drains and utilities as well as stabilization work on the foundations and fabric of the structures. While this work will ensure the survival of the buildings, much of it is also archaeologically destructive. Because of this, the Toronto Historical Board made a multi-year commitment at Fort York to co-ordinate restoration work and facilities improvements with archaeological mitigation, in order to preserve not only the buildings but also the archaeological resources surrounding them. Archaeologists working in conjunction with the architectural firm in charge of the restoration (Quadrangle Architects Limited) have mapped out utility routes to avoid archaeological features, and, where avoidance has been impossible, have undertaken excavation. In addition, digging by construction crews and installation work are monitored to reduce information loss.

Toronto Historical Board, Stanley Barracks, Exhibition Place, Toronto, Ontario, M6K 3C3
Conservation Licence 90-041

The sixteen-week excavation in 1990 focused on two areas: the 1814/1815 South Soldiers' Barracks and the 1815 Brick Officers' Quarters.

SOUTH SOLDIERS' BARRACKS

Although restoration work was scheduled for the South Soldiers' Barracks in the more distant future, immediate work was necessitated by a fire that occurred in the north end of the building in April 1990. The archaeological remains around the building were to be affected by the installation of a perimeter drain at the base of the stone foundation and by the stabilization of the foundation. Archaeological excavation would provide information regarding the foundation depth and condition, architectural alterations, historical drainage, and soil deposition around the building.

The South Soldiers' Barracks first appears on a map dated August 1814 (NAC, C2664). The structure was a one-storey, gabled, white-washed brick structure built on a mortared rubblestone foundation (figure 1). Originally, the building was divided into three rooms of equal size, with symmetrical placement of three doors and six windows along the east wall. At some point prior to 1865, four windows were added along the west wall. The interior partitioning of the building changed with the conversion of the middle door into a window, and the window immediately to the north into a door. Several historical records mention the building, including a report by Elias Walker Durnford in 1823 that the building had gutters that were found leaking "close against the wall" (NAC, RG 8, Series II, volumes 80–1). In 1837, the building's foundation was extensively repaired as part of a plan to raise the structure another storey, a plan that never came to pass (NAC RG 8, C Series, volume 447).

Figure 1: 1823 plan, elevation, and section of the South Soldiers' Barracks, Historic Fort York

A total of nine excavation units were opened adjacent to the building, with a total excavated area of 24.1 square metres. This work uncovered evidence of a pre-1815 heavily mortared foundation associated with a layer of burning. These large foundation remains are in the correct location for a large blockhouse, which appears on the 1813 George Williams's map of the fort (NAC, C2668). Unfortunately, there are no other historical records concerning this blockhouse and additional archaeological investigation is required to identify the structure. The builders of the South Soldiers' Barracks may have reused at least some of the pre-1815 foundation stones (particularly at the south end of the building). Variation in the methods of construction in the 1.20-metre deep foundation may also be the result of repairs made in 1837 in anticipation of future building modifications. Inspection of the foundation revealed regularly spaced plank-sized openings along the east side of the building 15–20 centimetres below the lowest course of brick. Openings such as these would fit the ends of joists for a verandah. Although an almost identical brick barracks at Fort Malden had a verandah (Parks Canada 1976), there is no record of a verandah on the Fort York barracks other than a small porch in front of each of the doors. These openings may have been added to the foundation during the 1837 repairs in anticipation of adding a verandah to the building.

The 1837 repair trench around the South Soldiers' Barracks was identified and excavated. This trench was the same depth as the foundation (1.30 metres) and contained a large number of artifacts, including late eighteenth/early nineteenth century forms of ceramics such as hand-painted creamware and pearlware (from a deposit that predated the building). An 1837 brick perimeter drain was discovered at the base of the trench (figure 2), indicating that as early as 1837 there were problems with water around the foundations. Although the drain consisted of reused mortared brick, the drain itself was not mortared — suggesting that the drain functioned much as a weeping tile and was not meant for sewage. A number of mid to late nineteenth-century layers were discovered overlying the 1837 trench, including ash deposits from the fireplaces and stoves. The post-1837–c.1865 stone porch support for the original middle door was excavated. During subsequent archaeological monitoring of the installation of the new perimeter drains late in 1990, another post-1837 stone porch support was found (for the northernmost door along the east wall). A c.1871 ceramic drain was discovered at the southeast corner of the building. This would have carried water from the rain gutters away to the nearby well located east of the building. All of these archaeological and architectural details are contributing to a more accurate restoration and interpretation of the building.

Figure 2: 1837 brick perimeter drain at the base of the foundation of the South Soldiers' Barracks, Historic Fort York

THE 1815 BRICK OFFICERS' QUARTERS

Although the basement of the 1815 Officers' Quarters was excavated in 1987, many of the archaeological features were left *in situ* until a decision was made concerning the future use of the structure. A curatorial decision was made in 1990 to restore the floor level to its c.1837 height. This meant that the uppermost, post-1837 archaeological features had to be removed. In conducting this work, a number of features were excavated, including a late nineteenth-century brick hearth, a late nineteenth-century concave brick surface drain, and part of a collapsed brick wall, which was left from nineteenth-century modifications to the basement.

OTHER MITIGATION WORK

During the 1990 installation of the water line and storm-drain branches (the trunk lines were installed in 1989; see Spittal 1991a), a total of 639 linear metres of trenching were monitored archaeologically under the supervision of David Spittal, the project's assistant director (Spittal 1991b). Archaeological testing prior to the installation of these lines was done in the summer of 1989 (Webb 1991a) and in some cases the lines were altered to avoid archaeological features. A number of archaeological features were recorded, including c.1860s stone box drains, wood box drains, an early to mid nineteenth-century brick road surface (consisting of one course of bricks, laid flat), a pre-1880s palisade around the East Magazine, stratigraphic information on the original contours of the moat surrounding that building, a section of the north stone foundation wall of one of the c.1814–c.1842 splinter-proof soldiers' barracks, a large c.1871 underground vaulted brick cistern, and a large mid nineteenth-century midden and ash pit in the central parade ground. All of the information gleaned from excavating and monitoring will be used for future research purposes and to determine the route of future utility lines.

The total number of artifacts catalogued (using dBase III+) from the 1990 excavation to date is 17,129, although work on the collection is still continuing. The total number of artifacts catalogued (using dBase III+) from the 1990 excavation is 38,727. Excavation continues to produce a varied assemblage of domestic and military artifacts. Ceramic types include eighteenth-century forms such as delftware, white salt-glazed stoneware, Chinese export porcelain, creamware, and pearlware, as well as later nineteenth-century types such as refined white earthenware and ironstone. Ceramics found in association with the South Soldiers' Barracks indicate that the soldiers were using ceramic vessels (not exclusively wooden trenchers and tinware). From initial examination, the ceramic types from the 1837 trench fill bear a similarity to those recovered from an 1829 trench along the east side of the Officers' Quarters (Brown 1988). Ownership scratches have been identified on a number of creamware and pearlware vessels around the Soldiers' Barracks. Regiments known to have been at the fort are represented by pewter or brass regimental buttons and military insignia. Other military artifacts include gunflints, musket fragments, and shako plate fragments.

The 1990 excavation at Fort York was the fourth consecutive season of fieldwork (for previous years' excavation reports see Brown 1988, Webb 1989, Webb 1991a). The cumulative archaeological data are contributing to a more accurate restoration and interpretation of the museum site.

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CONSULTING ACTIVITIES

CONSULTING ACTIVITIES OF ALGONQUIN ASSOCIATES

Ann L. Balmer

Algonquin Associates conducted eleven projects in 1990. Seven of these were related to environmental assessments involving the installation of gas pipelines, water supply systems, a road widening, and the development of heritage assessment guidelines for the Lester B. Pearson International Airport expansion on behalf of the Ontario Archaeological Society. One project (Temagami) was part of a comprehensive district plan (carried out in association with Archaeological Services Inc. and Unterman McPhail Cuming Associates), and two were historic site investigations (one in association with Unterman McPhail Cuming Associates). Finally, one subdivision assessment was also conducted.

GENERAL OVERVIEW

One environmental assessment project and the comprehensive district plan were located in northern and northeastern Ontario, while all of the other projects were located in south-central Ontario. The environmental assessment work entailed both background assessment of heritage potential and follow-up field investigation. With regard to the two historic site investigations, it may be of interest to note that Corell Draw, a versatile Canadian graphics software package, was used to good advantage for a number of different purposes. For example, one historic site investigation involved a feasibility study of locating and excavating the Rousseau site, a French trader's cabin. As part of the feasibility study, the original topography was reconstructed from early airphotos and compared with present-day topography. This was accomplished using Corell Draw software. This program was also used successfully in another project (conducted in association with Unterman McPhail Cuming Associates) to produce the site plan of a late nineteenth-century farmstead in Halton County and to measure drawings of the early twentieth-century barn on the property.

TEMAGAMI COMPREHENSIVE PLANNING PROGRAM: HERITAGE COMPONENT

The Ontario Ministry of Natural Resources, Temagami District, is conducting a comprehensive planning program with a heritage component including investigation of prehistoric and historic abori-

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ginal and historic Euro-Canadian settlement and land use, as well as the cultural landscapes resulting from this settlement and activity. The first phase involved compiling an inventory of known sites, developing a method for determining the potential for discovering additional sites of all types, and then mapping that potential at 1:50,000.

Purpose

The purpose of the heritage component of the comprehensive plan was to identify areas of concern with regard to the impact of development on heritage features or the conservation of heritage features, and to identify potential areas of heritage interest. The requirement was for information that could be used in land-use planning by the Ministry of Natural Resources and by municipalities in the area.

Algonquin Associates was involved in this project primarily with examining the prehistoric use of the study area. A major component of this work has been to develop a method for systematically mapping the prehistoric site potential for a large area that has few known sites. A deductive approach was selected for this purpose, which involves the synthesis of available ethnographic, historical, archaeological, and paleo-environmental information to build a model of cultural behaviour in relation to the physical environment.

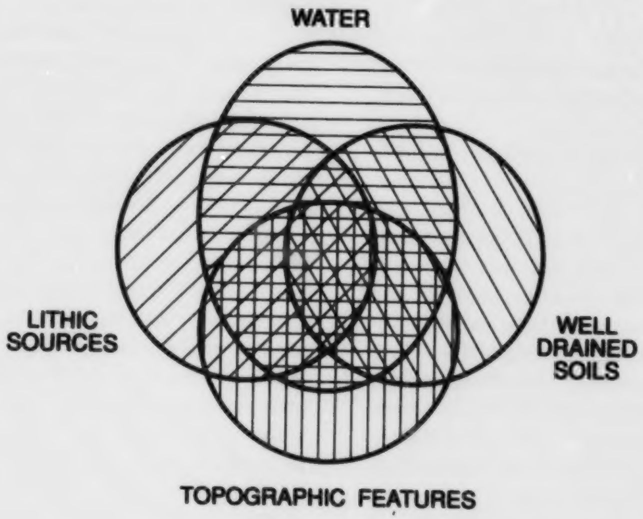
Considerations for the Selection of Variables

Accurate prediction of potential site locations depends upon the identification of settlement/activity patterns and the environmental characteristics (variables) associated with those patterns. In the context of environmental planning it also requires the selection of environmental characteristics that can be mapped at the appropriate scales. Table 1 shows the primary steps involved in this process.

The identification of these attributes involves the use of a combination of cultural information related to activity patterning in a given geographic area, combined with information on the physical characteristics or features of the environment that have an effect on those activities. Consequently, the attributes selected must be appropriate for the study area, as well as for each cultural adaptation examined. Paleo-environmental data is important to accurate model and hypothesis formulation (Butzer 1982; Judge and Sebastian 1988; Julig 1989). For example, the environmental attributes associated with Paleoindian settlement would be quite different from those associated with Late Woodland settlement because the respective people lived in different environments and practised different subsistence activities.

Environmental Attributes

The environmental attributes selected include features of the physical environment that can be used as indicators or surrogate measures of probable site location. This can be as simple or complex as the situation calls for or allows. It has been suggested that the high degree of correlation among environmental variables may very well allow the use of a few surrogate measures as indicators of a more complex set of environmental conditions affecting the location of activities (Kohler and Parker 1986, 433). These data define the large overall patterns within the environment, and therefore the general characteristics to which a human population must adapt.



Sample Environmental Situations and Ranking

Moderate Potential

- water (general shoreline) (area within 200 metres of lakes larger than 1 km square and rivers leading to or from these lakes)
- lithic (geological formations known to contain or possibly containing raw materials suitable for stone tool manufacture)
- topographic or physiographic feature (locally prominant ridges, topographic highs, eskers, steep slopes, wetlands, shoreline features such as points, islands, bays, river inlets and outlets)

High Potential

- water and well drained soil (area within 200 metres of lakes larger than 1 km square)
- water and lithic
- water and topographic feature (area within 200 metres of lakes larger than 25 hectares and rivers leading to or from them, an esker at a lakeshore, etc,)
- topographic feature and well drained soil (e.g., an esker in a sand deposit)
- dominant topographic features

Very High

(the following all refer to lakes larger than 25 hectares and rivers leading to or from them)

- water & topographic feature & well drained soil
- water & topographic feature & lithic
- water & topographic feature & lithic & well drained soil

Figure 1: Sample Environmental Situations and Ranking

The environmental attributes used for the Temagami study include:

- water bodies (potable and navigable)
- glacial features (spillways, shorelines, eskers)
- geo-materials
  - soil (well drained, deeper soils)
  - lithic resources (chert, rhyolite, quartz)
- topographic features (highs, anomalies)
- ecological features including eco-regions, and floral and faunal assemblages

A more complete list of systematically collected and readily available data sources in Ontario is shown in table 2.

The base environmental-data collection and mapping reveal patterning within the variables. These patterns were then examined to determine whether they required refinement into specific features and possibly ranking of these features.

The environmental variable of water can be used as an example to show how this variable was broken down into individual features for the Temagami study. The general variable of association with water was divided into several categories as a means of refining the levels of potential for different types of sites in an area with a great deal of surface water. These included an evaluation of

- the overall amount of water in the region
- drainage system patterns
- types of water (lakes, rivers, wetlands)
- place in the drainage system
- size of water body within the regional context
- age of water courses (Pleistocene, recent)

The use of these finer categories is based on assumptions and/or hypotheses about the cultural adaptation to, and use of, these features.

For example, most of the Canadian Shield is characterized by shallow soils overlying bedrock and by complex relief with an undulating rock surface. As a result, the drainage is complex and there is extensive water in shallow ponds, marshes and bogs, lakes and rivers. The combination of a few large lakes and rivers with many smaller streams, lakes, and ponds is common. A third group of water features is found in the Temagami area: small streams and connected water bodies (less than 25.0 hectares in size).

Because of the amount of water in most areas of the Canadian Shield, a detailed classification of water sources/features, distinguishing the types of features within watersheds and the micro-habitats in a shoreline environment, becomes important for predictive purposes. A major distinction was made between bodies of water (lakes) and water courses (rivers). It was argued that, within a drainage system, only the lakes above a certain size would have been sufficiently navigable, productive, and/or aesthetically pleasing to attract repeated settlement. Consequently, three criteria were used in determining the general potential of a body of water: type (lake or river), size, and place in the drainage system.

Assuming that the population density was relatively low throughout the prehistoric period, it was also argued that the few locations offering the greatest advantages would have been occupied repeatedly. These locations are usually characterized by specific features that distinguish them from the rest of the shoreline. For example, points of land and narrows in lakes offer views and wind protection from insects, rapids offer good fishing and proximity to the portage, and sandy beaches and bays offer protection from the weather and often good landing and habitation places.

Cultural Variables

Cultural variables used as indicators of potential sites include names on maps, oral tradition, and long-established portages in the area, as well as known historical and socio-cultural circumstances that would have influenced site selection, perhaps overlying physical or natural environmental factors. Time constraints did not allow the systematic inclusion of cultural variables in the mapping of prehistoric site potential for this stage of the Temagami project.

Integration

The selected environmental criteria were layered on a base map manually. The data must be superimposed in such a way that locational information is not obscured, while the range of environmental and cultural attributes of the environment are portrayed. The process of overlaying the data bases is illustrated graphically in figure 1. Each variable plotted separately has its own value in relation to specific hypotheses about past cultural activity. Taken in groups of two — for example, topographic feature and sandy soils — we can see the presence of environmental situations that may have been important to prehistoric land-use activities.

Through this process of overlaying all the variables, a comprehensive set of the possible environmental situations present within the study area is derived. These can now be further analysed to determine the patterns observed in the identified environmental situations. Some combinations may not exist or may have limited extent. The unique and unusual combinations of environmental attributes are also illustrated. Often the spatial relationships, nearest neighbours, paths and connections, and size and shape of the area are of relevance in evaluating the site potential.

In addition, the geographic setting of the location, not merely the type of location, must be considered. Each environmental situation must be mapped and viewed in the context of its immediate surroundings as well as the study area in general. For example, points of land may have different exposures and a variety of topographic settings, and a small body of water in an otherwise dry area, or a high point of land in a low area, would be weighted differently from these features in areas where they were common. The derived list of environmental situations and rankings in figure 1 illustrates how this technique provides a systematic description of a study area for incorporation into site potential models.

EVALUATION OF PREHISTORIC SITE POTENTIAL

The next step in the assessment process is the evaluation of site potential. Once the selected attributes are mapped, the various derived environmental situations can be assessed. The attributes may be listed in all the combinations that they actually occur within the study area and the environmental situations ranked in order of importance. A weighting scheme may be used to give more importance to certain attributes and situations or to those in certain contexts. These situations may be grouped, indicating general categories of potential for prehistoric activities — for example, high, moderate, and low (see figure 1). Internal weighting of the attributes and ranking of the environmental situations must be

TABLE 1
Primary Steps in the Environmental Planning Process for the Assessment of Prehistoric Archaeological Potential

1	Define study area
2	Review ethnographic settlement data (with reference to physical and cultural environment)
3	Review known archaeological site data
4	Review paleo-environmental data
5	Formulate settlement model
6	Identify attributes associated with site location (physical and cultural environments; appropriate for scale used)
7	Map attributes
8	Derive environmental situations
9	Identify areas with potential for archaeological materials (integrate overlapping attributes)
10	Generate hypotheses for field investigation and model validation
11	Test hypotheses and collect empirical data
12	Revise and refine site location models

specifically derived from assumptions and hypotheses regarding the cultural adaptation to the specific environments.

For the Temagami project, the environmental situations were derived by listing the attributes in all combinations that occurred, grouping them, and then ranking them by group. The result of the ranking was that environmental situations consisting of a single attribute covering a large area, such as a general lake or river shoreline or an area of geological deposit that may contain material suitable for stone tool manufacture, were assigned a moderate rating. The addition of a specific shoreline feature or a sizeable sand deposit to the general shoreline category would raise the rating to high potential. The combination of three or more attributes raised the rating to very high. Two topographic highs (Maple Mountain and Ishpatina Ridge) were included in the ranking as specific features because of the documented historic significance of these and similar features elsewhere, and, consequently, their presumed significance prehistorically. The area outside the identified boundaries of moderate to very high potential was considered to have low potential for prehistoric sites.

USE OF SITE POTENTIAL MODELS

A model developed using the method described above is a powerful planning tool. However, it is intended for use in the initial stages of planning at relatively general scales of mapping (1:50,000 to 1:10,000). A model at this scale cannot be used to determine exact locations on the ground of areas of high or low archaeological potential. The latter must be accomplished by incorporating information at more detailed scales, including field-based data, into the evaluation of archaeological potential. One result of this more detailed assessment will be the identification of high potential areas in the generally low potential areas identified at 1:50,000.

Hypotheses generated by models such as the one described above should be tested in the field. Eventually, as more empirical data are collected, more sophisticated and accurate models can be formulated.

TABLE 2
Ecological Data Base Information

Type	**Attribute**	**Sources**
Water	water courses water bodies watersheds	NTS maps at various scales Landsat Digital Data
Wetlands	peat soils wetlands	Northern Ontario Engineering Geology Terrain Study Maps 1:50,000 NTS maps Landsat Digital DataWetland Inventory for Northern Ontario (in progress)
Soils	moisture drainage parent material	Northern Ontario Engineering Geology Terrain Study Maps Primeland Inventory Maps — (Forest Soils Maps 1:15,000) in progress
Topographic features	local relief topography shoreline features	Northern Ontario Engineering Geology Terrain Study maps NTS maps at 1:50,000
Geology	bedrock geology surficial geology	MDM Bedrock Resource maps, various scales Northern Ontario Engineering Geology Terrain Study Maps MDM Surficial Geology maps, various scales
Glacial features	former shorelines eskers moraines spillway channels deltas	see surficial geology maps described above
Ecological regions	ecoregions ecodistrict ecosection ecosite 1:10,000	Ecological Land Classification Series, Sustainable Development Branch, Federal Government (Completed down to ecodistrict, 1:250,000 scale

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CONSULTING WORK OF YORK NORTH ARCHAEOLOGICAL SERVICES

Gordon C. Dibb

In 1990 York North Archaeological Services (YNAS), under the direction of Gordon C. Dibb, conducted six pre-development surveys in south-central Ontario. Four of the surveys were completed in 1990 and two have phases that will continue into early 1991. The six surveys included four subdivision assessments (in Baysville, Bowmanville, Keswick, and Peterborough), an assessment of a proposed quarry near Cannington, and a highway-widening assessment in Peterborough.

BOWMANVILLE

A survey of a 35.73-hectare property for a proposed subdivision resulted in the recording of two archaeological sites: one prehistoric (Soper Creek, AlGq-55) and one historic (Darch Farmstead, AlGq-56).

Soper Creek Site

This site is located along the south edge of an orchard on the former Darch Estate about 150 meters from Soper Creek. The surface collection from the site consists of one chert flake made of Onondaga chert. A subsequent visit to the site after further weathering failed to produce additional evidence of prehistoric remains.

Darch Farmstead Site

Historical background research suggests that prior to 1875 this property was held largely by nonresident land speculators. Stephen Cotton, who purchased the property in 1875, was responsible for its early development, but he subsequently lost his investment because of foreclosure proceedings in 1894. In 1902 the Darch family purchased the property and initiated a major phase of development. In 1924 John H.H. Jury, a local philanthropist, purchased the property from the Darch estate and immediately turned the deed over to the crown, for the purpose of developing the property as a residential training school for boys. In 1941 the province turned over the school facilities to the Department of National Defence for use as an internment camp for German POWs during World War II (Hoffman 1990). Known as "Camp 30," the facilities housed mostly German airforce and Africa Korps prisoners until the end of the war. After 1945 the estate was again used by the province as a training school for boys.

1983, with the phasing out of this form

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of provincial social service, the facilities were used for a brief period as a school for Malaysian students learning English as a prerequisite to further education in other Canadian colleges and universities (Hoffman 1987).

The *Darch Farmstead*, which occupies basically the western half of the training school property, was used by the training school and the Department of Defence as an operational farmstead. Training school students were given an opportunity to participate in farming activities in order to learn a potential trade, while the German POWs were allowed to grow crops and raise a few animals to supplement their rations.

As part of the archaeological investigations, a number of standing and dilapidated building structures were recorded and photographed. Surface survey and shovel-testing activities were also conducted. Historical research, confirmed by shovel testing, revealed that the site of the early twentieth-century Edwardian structure (the Darch mansion) had been totally destroyed by landscaping in the 1970s. Most of the buildings associated with the institutional farmstead have now either fallen or are in an extremely poor state of repair. Surface collections of the plowed fields on the entire property produced large quantities of institutional ceramic artifacts and artifacts related to dairy farms. No definite clustering was noted and it is suggested that most of the artifact scattering is the result of disturbances due to cultivation and related activities (for example, manure-spreader scatter). A small type collection of the institutional ceramics and dairy-related artifacts was retained for research purposes.

KESWICK

A survey of a 325-hectare property for a proposed subdivision resulted in the recording of six historic sites dating from c.1830 to 1890. A number of previously recorded prehistoric sites and findspots (Dibb 1979, 1985) were also reinvestigated, with archaeological materials being recovered from two sites (BbGu-6 and BbGu-201).

Draper Site

The Draper site (BbGu-6), a late Paleoindian encampment located along a former Lake Algonquin strandline, was recorded in 1978 by Gordon C. Dibb and monitored throughout the 1980s. In 1990, YNAS resurveyed the site and recovered a complete lanceolate projectile point and three specimens of lithic debitage. To date, more than forty artifacts have been recovered from two separate loci identified on the site (figure 1). The artifacts include two lanceolate projectile points, one biface preform, three end scrapers, one side scraper, one spokeshave (convex side scraper), and thirty-three pieces of lithic debitage. The artifacts/debitage are almost exclusively Collingwood and Trent River cherts.

Ralph Draper Site

The Ralph Draper site (BbGu-201), a small site situated along the edge of a Late Algonquin strandline, was recorded in 1980 by Gordon C. Dibb, who also conducted monitoring activities at the site from 1981 to 1983. The initial surface collection produced five chert flakes. One flake is Balsam Lake chert, a raw material type which suggests that the site may have been occupied by Late Paleoindian peoples. In 1990, YNAS recovered a single flake of Onondaga chert during a resurvey of this site.

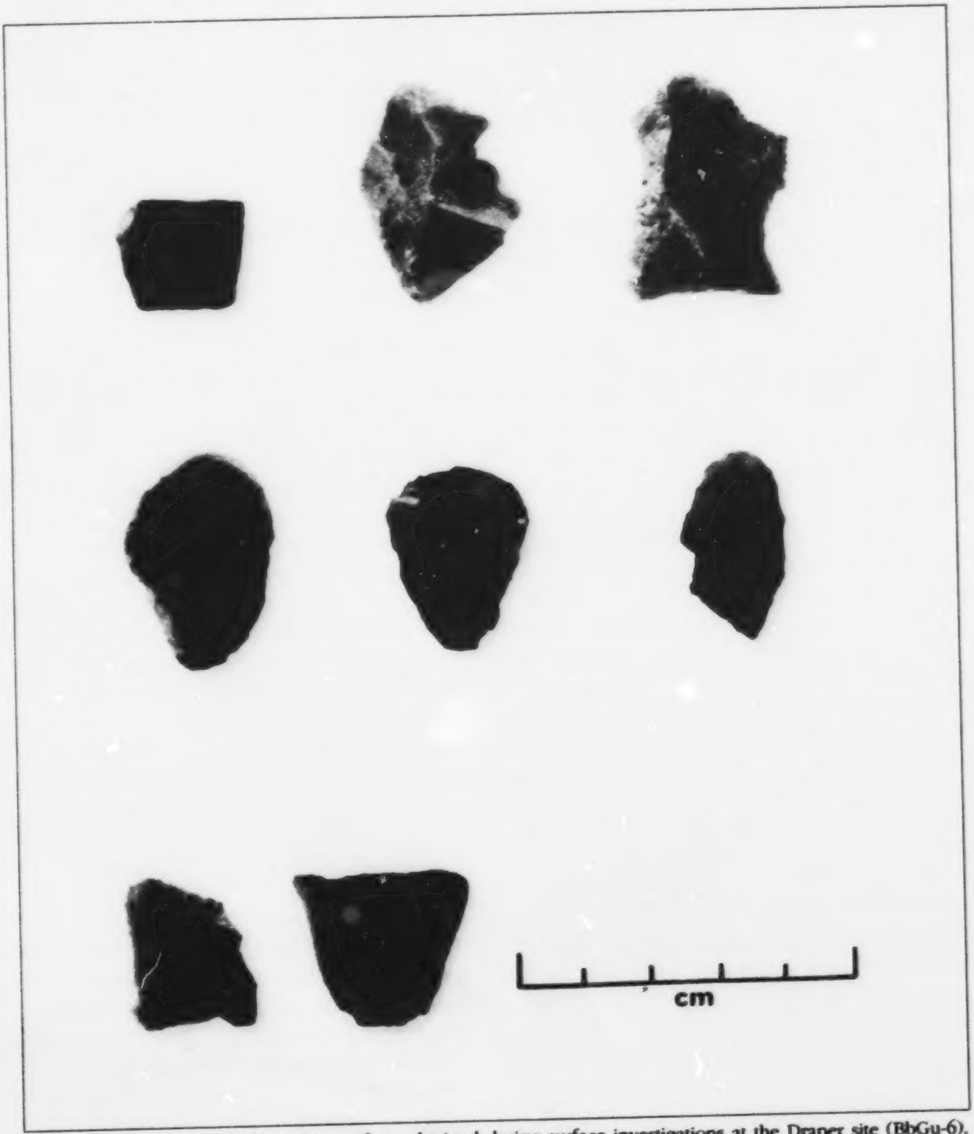

Figure 1: Selected Late Paleoindian artifacts obtained during surface investigations at the Draper site (BbGu-6), 1978–90. Photograph courtesy of the Royal Ontario Museum.

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CULTURAL RESOURCE CONSULTANTS: 1990 ACTIVITIES

W. Barry Gray

In 1990 the new consortium of Cultural Resource Consultants (CRC) was formed by Malcolme Horne, Paul Racher, Colin Varley, and W. Barry Gray. In its first year, the company completed three archaeological projects in Ontario. Field crews varied in size from two to four individuals under the direction of one of the four partners.

SAINTE-MARIE AMONG THE HURONS

Two archaeological resource assessments were undertaken for Huronia Historic Parks, Midland, Ontario. The first involved the seventeenth-century French Jesuit mission community of Sainte-Marie Among the Hurons (BeGx-1). In April, excavations were conducted to relocate the grave-site of at least one of Canada's Roman Catholic martyrs, Jean de Brébeuf. The grave-site was initially found during excavation inside the Church of Saint Joseph by Father Denis Hegarty, SJ, in 1954. Subsequent to that work, the exact location of the grave became uncertain because of confusion brought about by the reconstruction of the church during the 1960s and contradictory statements by researchers.

The exact location of the grave-site was needed by Sainte-Marie staff for research purposes. To relocate the grave-site, it was decided to remove the topsoil from the area of Hegarty's 1954 excavation. This successfully re-exposed the grave-site. The subsurface features were mapped and photographed. The area was then back-filled and landscaped to its former condition.

Work was conducted at Sainte-Marie Among the Hurons again in November and December. Twenty-four test squares were excavated along a proposed gasline route between the main interpretive centre and two of the reconstructed buildings on site. Each test unit measured 50 by 80 centimetres and had a minimum depth of 65 centimetres. The size, depth, and location of each unit was determined by the requirements of the subsurface gasline drill bit.

The test excavations produced a total of 266 artifacts from disturbed and mixed-soil strata. The artifacts represent activities from the seventeenth, nineteenth, and twentieth centuries. No significant subsurface features were discovered in any of the test squares.

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HISTORIC NAVAL AND MILITARY ESTABLISHMENTS, PENETANGUISHENE

The second archaeological resource assessment took place at the Historic Naval and Military Establishments (BeGx-37), located along the east shore of Penetanguishene Bay on the outskirts of Penetanguishene, Ontario. This site was an active British naval and military outpost between 1815 and 1856.

Early in 1991, plans for a food and retail facility were proposed in an area south of the reconstructed Naval Storehouse. In November–December, the area was shovel tested at 5-metre intervals. Since the soils were saturated from snow, rain, and natural ground water, it was necessary to take the contents of the test units indoors for water screening. No significant finds or subsurface features were detected within the assessment area.

CONSULTING ACTIVITIES OF OLD & IN THE WAY: 1990 FIELDWORK AT POINTE DE MEURON

Andrew Hinshelwood

The principal field project of Old & In the Way for the 1990 season was the stage 3 test excavation of a portion of DcJi-4, site of the Hudson's Bay Company post Pointe de Meuron (1816–21). The site is located on a series of abandoned river terraces of the Kaministiquia River. The property, owned by the Ontario Ministry of Government Services, is the location of the interpretive historical park, Old Fort William. This park is a recreation of the North West Company post Fort William (DcJh-8) and is operated by the Ontario Ministry of Tourism and Recreation.

The planned construction of an outdoor amphitheatre near the visitor centre at Old Fort William required test excavations in areas of potential archaeological interest. Earlier archival research indicated that a low terrace along the present river margin had long been used as a campsite (cf Campbell 1980, fig. 29, bottom). This was supported in 1989 by the recovery of one trade bead and fragments of an early "TD" clay pipe during limited test excavations (Hinshelwood 1989b). Test excavations in 1990 sampled buried deposits and resulted in the recovery of possible fur-trade period artifacts in presumed association with a number of hearths. Subsequent analysis of the artifacts and their context revealed, however, that the artifacts had been redeposited on the lower terrace sometime after the fur-trade post had been abandoned.

HISTORICAL BACKGROUND

Major reference works on the fur trade and the history of western Canada do not mention the post at Pointe de Meuron. However, the two key incidents surrounding the establishment and naming of the post are often mentioned: the seizure of Fort William by Lord Selkirk in 1816, and the presence of the decommissioned de Meuron soldiers he brought with him to "settle" the Red River colonies. According to Kleinfelder, the primary reason for the post's establishment was that "Selkirk himself was unsure of his legal rights in his occupation of Fort William, thus it is perhaps logical that he would have the bulk of his party winter elsewhere. Pointe de Meuron would have been the furthest convenient point from Fort William to establish a temporary camp along his planned route to the west" (Kleinfelder 1972, 21).

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The fact that the post continued to be occupied after the first winter may be due to a number of factors. Principal among them are competition for trade, the establishment of a territorial claim, and the intention of aggravating an already strained relation between the two rival firms.

Post journals and related documents suggest that the site occupied a fairly extensive area on the Pointe. These documents are not clear on the number of structures present or in use at any given time, their location, or their distribution. It is clear from correspondence in the Selkirk Papers that the construction was ongoing during the occupation, and that much of this work may have been involved in the reconstruction of poorly built structures. The major structures of the post include:

- a blacksmith shop/forge/earthen chimney
- a 40 by 24 foot raised 2-storey house of hewn timber
- a store/blockhouse of hewn timber, 50 by 20 feet
- a dwelling, well glazed with small cellar, 30 by 14 feet
- a canoe house, 40 by 20 feet
- four small houses (the original structures of the post)
- a "bastion"
- a large cellar, not in use in 1820

In addition to these buildings, at least one burial is recorded as occurring at the post (Miles 1819). The distribution of the buildings is not recorded in any of the surviving documentation, although the Bayfield map (1828), which shows this section of the Kaministiquia River, has a sketch of several buildings on the middle and upper terraces.

After 1860 the Pointe was reoccupied by agriculturalists and a number of residential and maintenance structures were erected at the site. Photographs reproduced in Kleinfelder's report (1972) show at least three different farmhouses on the site between 1882 and 1894. Twentieth-century inhabitants of the Pointe noted that construction on the upper terrace was accompanied by the levelling and filling of the remains of the earlier buildings (ibid., 15).

ARCHAEOLOGY

All archaeological fieldwork undertaken at the Pointe has focused on attempts to relocate the Pointe de Meuron post. The archaeological site was first recorded by Dawson (1972). This record was made without confirmation of archaeological deposit and should be considered somewhat premature. Actual fieldwork at Pointe de Meuron has been undertaken by Kleinfelder (1972), Fox (1975), Coolen (1983), and the author (Hinshelwood 1989a; 1989b). Kleinfelder deduced the location for the Pointe de Meuron site from an analysis of documentary sources, particularly Bayfield's chart, and landscape association (Kleinfelder 1972, 2).

Archaeological test excavations undertaken in 1990 were directed towards uncovering historic features or artifacts that would indicate a fur-trade period occupation at that locality. A series of seven 2 by 10 metre trenches were laid out within the site grid established in 1989 and were fully or partially excavated. Trench 7, located on the lower terrace or "landing," was the only trench that produced early historic and fur-trade period materials. Trench 7 was oriented north-south and was situated roughly 2 metres back from, and parallel to, the present river bank. Surrounding the trench were two areas of recent disturbance: a trench excavated to provide electrical service to a small outbuilding, and the moorings and path installed for an earlier dock facility.

Excavation of trench 7 was initiated by digging two 1-metre square test pits in the northeast and southeast corners of the trench. Soils observed were dark, organic rich, and structureless to a depth of about 50 centimetres. A concentration of nails and charcoal was noted at a 30-centimetre depth in the southeast test pit, with a thin lens of coarse sand at a 50-centimetre depth. A lens of fire-reddened sand, charcoal, and bone was noted at a 50-centimetre depth in the northeast test pit. These discoveries were quite important, being the first definite, undisturbed archaeological features uncovered at the site.

The test pits in the corners of the trench were expanded to the west by 1-metre squares to refine understanding of the soils prior to detailed excavation. A former occupation surface was uncovered in the trench, between a 40- and a 50-centimetre depth. This surface, sloping slightly east towards the river, was marked by a change in the texture and compaction of the soil. Disturbance along the west wall of both tests, related to a trench excavated for the installation of an electrical cable, was also noted.

Excavation of the remainder of the trench was initiated with the removal of the turf. The turf was shovelled off and was not screened for artifacts. Following the removal of the turf, loose soil was removed and the surface examined for any soil anomalies that may have marked features or disturbance. None were noted. Excavation of the turf and loose soil resulted in the removal of approximately 25 centimetres of the upper soil. This constituted level 1.

Excavation continued by 5-centimetre levels, using trowels, with all of the fill being passed through 1/8 inch mesh screen (dry) to facilitate the recovery of artifacts. Artifacts from the undisturbed portion of the trench were retained. The excavation of the first three 5-centimetre levels resulted in the recovery of a variety of twentieth-century material, although some earlier artifacts, such as lithic flakes, did occur.

The floor of level 4, at a depth of 40 centimetres below the surface, began to show the lens of fire-reddened sand noted in the test-pit profiles. The lens was marked by a compaction of the soil, and by higher levels of clay than in preceding levels. Compared to the structureless loam above, this lens was very obvious. It probably represents a period of heavy use when the natural riparian vegetation (grass and sedge) was heavily trampled, and perhaps largely replaced by lower, hardier species. A series of hearth features were evident through three levels of excavation (4 through 7).

The hearth features were clearly visible as bright orange-red soil discolourations with concentrations of charcoal. Associated with the hearths were clay-pipe fragments (unfortunately lacking maker's marks), fragments of window-pane glass and glass bottles, and numerous heavily oxidized square nails. Some of the nails occurred inside the hearths.

ANALYSIS

The absence of temporally diagnostic artifacts from the hearth level made it difficult to determine immediately the age of the hearth deposit. General age determinations for nails (Nelson 1963) and window-pane glass (Kenyon 1980) were used to group artifacts belonging to broadly different time periods. These groupings are based on changes in the manufacturing technology of glass and nails. For nails, all types dating to before the 1830s were grouped together, the remainder being classified into a general nineteenth-century category. Clay pipes in the sample do not have datable markings.

Irregular distribution of prehistoric material by depth in trench 7 was viewed as a product of both water transport during the initial deposition of the artifacts and the movement of smaller objects within the soil profile during freeze–thaw and flooding episodes. The greater number of prehistoric artifacts in the upper levels suggests that factors other than stratigraphic super-positioning, such as sedimentation and the introduction of fill to the area, were responsible for the presence of some of the artifacts in the trench.

Vertical distribution of nails indicate that both the pre-1820s styles (square cross-sections, wrought heads) and the general nineteenth-century styles (machine cut, machine heads) have their highest frequencies in level 4. Pre-1850 window-pane glass also peaked in level 4, but, unlike nails, occurred only in levels 3–5. The distribution of twentieth-century material occurs only within the upper three levels, making it possible to argue for a separation between the pre-1850 material and the more recent material somewhere within level 3.

It is not possible to determine whether the pre-1850 cultural material in trench 7 is related to the fur-trade post of Pointe de Meuron or to a different occupation. In all probability, the deposition of the nails in the hearth layer was the work of one of the initial agricultural settlers at the Pointe. Earlier intuitive interpretations that the post was located on one of the higher terraces, and probably within the pasture area immediately west of trench 7 (Hinshelwood 1989b), deserve investigation.

ACKNOWLEDGEMENTS

The archaeological fieldwork described in this report was conducted under contract to the Ontario Ministry of Government Services. The lasting contribution made by Joyce A. Kleinfelder to the Fort William Archaeological Project, 1970–5, to this fieldwork, and to the field of fur-trade archaeology is also acknowledged.

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ACTIVITIES OF THE ARCHAEOLOGY DIVISION OF THE REGIONAL MUNICIPALITY OF WATERLOO

Scarlett E. Janusas

The Archaeology Division of the Regional Municipality of Waterloo conducted two archaeological assessments/investigations: one in the township of Wilmot (the Baden brewery) and the other in the City of Cambridge. Field crews varied in size from one to twelve and were under the direction of project manager and principal investigator Scarlett E. Janusas. Both of these projects were funded internally by the Regional Municipality of Waterloo.

TEST EXCAVATIONS AT THE BADEN BREWERY, BADEN, ONTARIO

A zone change application was submitted to the Regional Municipality of Waterloo requesting permission to renovate and use an existing building for a public accounting office. The building occupies part of Lot 15, south of Snider Road, and historically was used as a brewery and a creamery (AiHd-91).

The Archaeology Division received the landowner's permission to investigate the footings of the brewery building for the purpose of determining the depth and nature of the footings, the material culture remains, and possible future archaeological work required for the area.

Five 1-metre squares were excavated. This work produced no evidence of a builder's trench. It is possible this trench was totally obliterated by previous disturbances to the area as a result of soil testing conducted by the owners.

The analysis of artifacts and other site data clearly indicates that the site was occupied from sometime prior to 1850 to after 1933. Although historical documentation indicates that the building was used as both a brewery and later a creamery, there is no evidence, other than the presence of bottle glass which cannot be identified as either beer or milk containers, of either brewery- or creamery-related activities. Owing to the limited excavations, it is possible that material culture relating to the brewery and creamery periods is located elsewhere on site.

It is recommended that full-scale archaeological testing be conducted on the site should further disturbances of the brewery building, immediate vicinity, or other areas of the property be proposed.

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INVESTIGATIONS OF CONSTRUCTION ACTIVITIES RELATED TO THE RENOVATION OF THE CAMBRIDGE CITY HALL, CAMBRIDGE, ONTARIO

The Archaeology Division of the Regional Municipality of Waterloo was approached by Totten, Sims, and Hubecki to monitor construction activities at the City Hall, 46 Dickson Street, in Cambridge (AiHb-161). This action was stimulated, in part, by concerns raised by the Ministry of Culture and Communications and the Cambridge Local Architectural Conservation Advisory Committee about the potential impact of the renovations on archaeological evidence relating to the history of the building.

Archaeological investigations were confined to observations on the three construction trenches after they were completed. The front facade of the City Hall, facing Dickson Street, was not subject to any below-ground activities (this area was scheduled for excavation in 1991).

The most apparent physical aspect of the construction of the building is that the foundations rest directly on bedrock that changes in depth from north to south, from 1.3 metres to 0.2 metres. Of interest is the fact that the foundation of the structure was accommodated to this change in elevation without affecting the building elevation itself.

The area below the central window along the east side of the building, currently used as a doorway, had been totally excavated by workmen prior to investigation. However, the trench itself proved of interest. It appears that there was a retaining wall built in the builder's trench, which to some extent explains the wood planking located on the opposite side of the trench of the door/window.

The original entrance to the building was located in the rear of the structure, facing north. This is now the rear entrance. This area contained evidence of considerable disturbance from at least two prior renovation/repair episodes. Depth of the foundations along the wall is approximately 1 metre, but varies slightly in elevation from east to west.

Unfortunately, no artifacts were recovered *in situ*. All material was salvaged from back dirt piles, the bottom of the trench, or from the construction crew that collected some objects.

The results of the archaeological investigation of the old Cambridge City Hall are superficial, because of the limited nature of archaeological involvement. The artifact material recovered from the construction activities is out of context, and pertinent data relating to material culture, activity areas, and any possible suppositions are unavailable to the researcher. In addition, the stratigraphic occurrence of the artifacts with respect to various building/renovation episodes is unknown.

However, a number of pieces of evidence corroborate the background research. First, the abundance of recovered butchered bone relates to the period when the basement of the City Hall was used as a butchering shop, prior to 1887. Second, the absence of a cornerstone or time capsule supports the historic records, which indicate that the cornerstone was removed during renovations in 1965. Third, the foundations of this building were built to accommodate the changing elevation of the bedrock directly below the foundation walls, demonstrating that problems were encountered during construction. This also demonstrates the expertise of the builders during the 1850s.

The most important conclusion to be drawn from this project is that archaeology must be a central portion of any redevelopment, particularly in the planning stages prior to any construction activity. This project, had it been initiated much earlier, would have recovered additional information that, unfortunately, now has been lost.

DUNDURN 1: AN ARCHAEOLOGICAL PERSPECTIVE OF DUNDURN PARK

Jon K. Jouppien

In 1990 the Heritage Services Branch of the City of Hamilton initiated an assessment of archaeological resources in Dundurn Park. Terms of reference for this work were devised by Marilynn Havelka, manager of Cultural Services, and Bill Nesbitt, curator of Dundurn Castle.

Dundurn Park, located on the heights of Burlington Bay, overlooks Lake Ontario. The park is situated on a bluff that was a former beach ridge of prehistoric Lake Iroquois (Zumberge and Nelson 1972). In this part of the province, archaeological evidence indicates a history of human occupation spanning over 12,000 years (figure 1). In 1970 a Late Archaic component was located during excavation for a new entrance to the Dundurn parking lot (*Hamilton Spectator*, 28 May 1970; William Noble, personal communication).

PREVIOUS ARCHAEOLOGICAL WORK IN THE PARK

As early as 1839, British officers with the 1st Battalion left an account of their excavation of a prehistoric burial mound on the site. From their brief description of mica grave furnishings and what was possibly a polished stone gorget, the mound would appear to be Initial Woodland in age (*Kewa* 1985). In 1982 and 1983 Douglas Craine recovered a projectile point and human remains from the surface in the east gardens of the park (Craine 1983). Since the artifact and the human remains were not *in situ*, it is not known whether they were originally associated.

CURRENT ARCHAEOLOGICAL INVESTIGATIONS IN THE PARK

The current project, "Dundurn 1," conducted archaeological testing in four areas of the park: the terraced rose garden; the courtyard; the cockpit; and "Inchbuie," the MacNab family burial plot.

Terraced Rose Garden

Since it had been suggested that the garden may have been superimposed over the former site of the burial mound (Bill Fox, personal communication), the terraced rose garden was given top priority and became the first test location. Two units excavated in the flower beds revealed a simple stratigraphy. The upper horizons consist of rich humus. These horizons contained chert fragments, a

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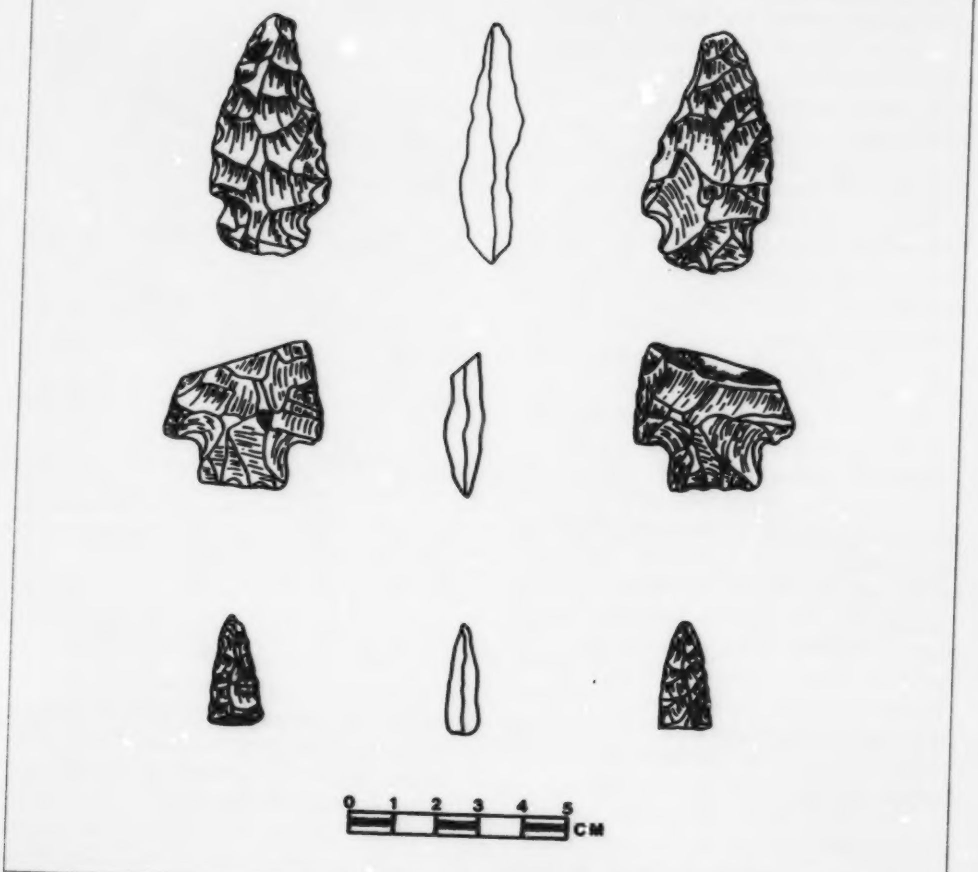


Figure 1: Assemblage of stone tools recovered during testing in Dundurn Park. *Top*, Late Archaic point from unit AhGx-26-h-2, test pit at Inchbuie. *Centre*, Late Archaic point from test pit AhGx-26-e-2, located inside the Dundurn Castle courtyard. *Bottom*, The tip of a point or a drill from test pit AhGx-26-b-1, located in the terraced rose garden.

projectile point or drill, and historic artifacts dating from c.1790 to the present. Underlying the humus is a deep sterile stratum of sand. This stratigraphy was consistent throughout the test in the garden beds. The gardens appear to be composed primarily of humus-rich soil, possibly from other locations, superimposed over the culturally sterile underlying sandy subsoil. The great amount of mixing due to gardening has obliterated any features and the original context of the artifacts.

A third excavation unit, located northeast of the rose garden, was excavated to provide an indication of the surrounding stratigraphy. Some shallow disturbance dating to the 1960s restoration of the area was detected. Underlying this level was a thick stratum containing early nineteenth-century ceramics, chert, and nineteenth-century military artifacts (figure 2). This stratum probably represents a major nineteenth-century landmoving operation associated with either the War of 1812 or the creation of MacNab's terraced garden, which was built in the early 1830s. No evidence of the prehistoric burial mound was detected.

Courtyard

Testing was conducted in the Dundurn Castle courtyard to examine the stratigraphy and foundations that have recently been of structural concern in the area of an underground tunnel and the wing known to have been a bowling alley during the last half of the nineteenth century. Excavation in both areas located the original builder's trenches at a depth of over 2 metres. The upper stratum contained many intrusive pit features, and this mixing was reflected in the artifacts that represented every period of the site's history: prehistoric chert flakes and a late Archaic side-notched point; historic artifacts represented by several artifact types but most conspicuously by a variety of late eighteenth- and nineteenth-century ceramic ware types; 1961–7 restoration period vitreous brick and portland cement-based mortars; and, finally, pressed brick, crown-finish bottle caps, and amber bottle glass from the 1970s, when a pressed brick patio was constructed and the courtyard was used as a beer garden.

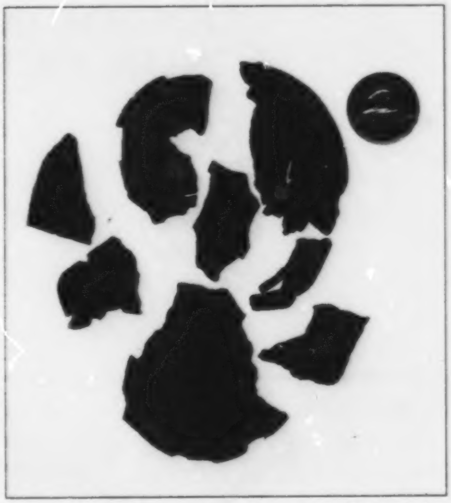


Figure 2: The fragmented pieces of a brass shako plate of the Royal Scots, recovered from test unit AhGx26-c-2, the control unit located outside of the rose garden. This was the earliest issue of plate, in use by that regiment from 1800 to 1812 and worn with the so-called stove-pipe shako.

The remains of a nineteenth-century ground surface cover (a sand bed and cobblestones), typically used for walkways in gardens of that era, were found in several test areas. A similar cover was found underlying another sand bed with cobble inclusions, which was interpreted as the cobblestone surface recreated during the 1961–7 restoration of the castle courtyard.

Excavation also uncovered an interesting historic period waterproofing system of heavy impervious clay applied over the tunnel vault mentioned above. Water leakage reported by the staff at Dundurn Castle occurred in the areas where this clay had been removed during the installation of the pressed-brick patio, which was superimposed over the tunnel.

A vaulted brick cistern in the centre of the courtyard was also investigated and photographed. The cistern is interpreted to date from the twentieth century, based on the pattern of brickwork and material used in its construction. The structure contains materials and exhibits workmanship similar to the kitchen fireplace, oven, and hot hearth complex, which date from the restoration of the site in the 1960s.

Cockpit

The cockpit is a small outbuilding, east of Dundurn Castle. Its original function was unknown for many years. During the restoration it was interpreted by restoration architect Anthony Adamson as a cockpit. Cock fights were often held in buildings containing bleachers built around a central pit in which the fights took place.

In the 1970s the City of Hamilton, with the assistance of the *Hamilton Spectator*, restored the exterior of the building and landscaped the grounds forming an outdoor amphitheatre around the building. The entirety is referred to as the Cockpit Theatre.

Two test units were excavated around the exterior of the cockpit to locate the historic grade. It was determined that in both test areas the historic grade was buried under a considerable amount of postrestoration overburden. The most easterly test unit revealed an entire buried doorway 1.5 metres below the existing grade. The sod horizon, representing the prerestoration grade, was identified at a depth of approximately 4 metres. The overburden contained many examples of 1960s vintage artifacts.

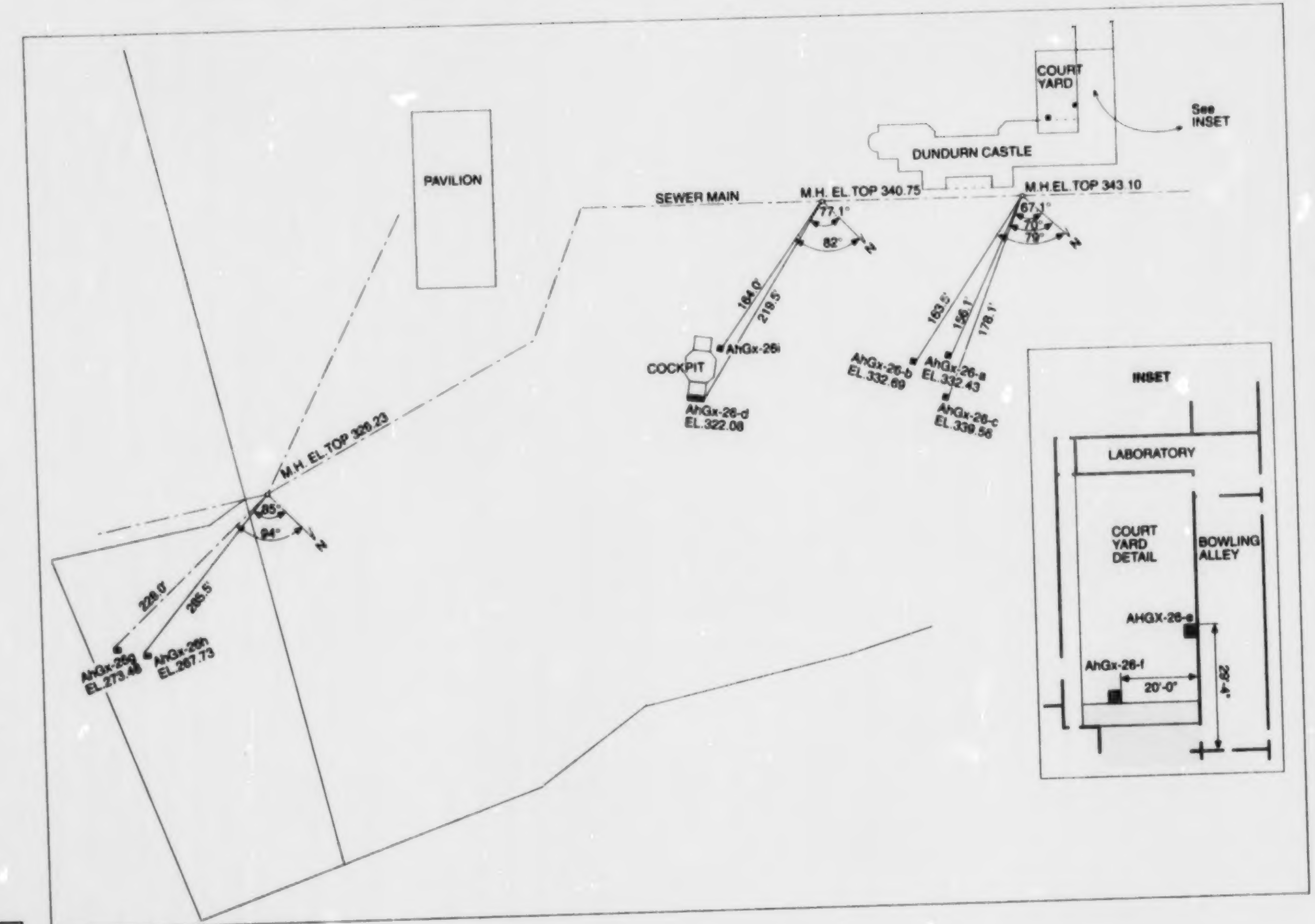
The westerly test unit was situated outside walls built into the level plane on top of the bluff. It was suspected that the historic grade would be less deeply buried there. Surprisingly, even at that location, the historical grade was nearly 1 metre deep.

Inchbuie

An effort was made to locate by test excavation the stone walls that once surrounded "Inchbuie," the MacNab family burial plot. It was hoped that it would be possible to locate the footings of the perimeter wall so that the entire feature could be delineated at some time in the future. Using an old railway map, which indicated the rough location of the burial plot, the test area was probed with metal chaining pins and two units were excavated at locations of greatest stone concentrations. Both units exposed rubble stone footings along what is believed to be the south wall of the burial plot. Additional work is required to locate all four corners of the plot. Recommendations have been made to expose this feature, stabilize the footings, and interpret the site as part of the historic park.

CONCLUSION

The 1990 archaeological work provides preliminary data for an archaeological master plan that will assist in the future protection and management of Dundurn Park (figure 3). The City of Hamilton plans to continue mitigation work and recognizes the need for ongoing


COURT YARD
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AhGx-26i
COCKPIT
AhGx-26-d
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153.5'
156.1'
178.1'
AhGx-26-b
EL.332.69
AhGx-26-a
EL.332.43
AhGx-26-c
EL.339.56
M.H. EL.TOP 326.23
85°
94°
N
228.0'
265.5'
AhGx-26g
EL.273.48
AhGx-26h
EL.267.73
INSET
LABORATORY
COURT YARD DETAIL
BOWLING ALLEY
AHGX-26-e
AhGx-26-f
20'-0"
29'-4"

Figure 3: Site map, Dundurn Park

archaeological surveillance to insure the protection of archaeological/historic resources at Dundurn Park.

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MINISTRY OF TRANSPORTATION: ARCHAEOLOGICAL INVESTIGATIONS IN THE SOUTHWEST REGION, ONTARIO

Paul A. Lennox

In 1990 the Archaeological Unit of the Ministry of Transportation, Southwest Region, continued survey and salvage investigations of areas in the vicinity of proposed highway projects. The fieldwork was conducted with the assistance of Carl Murphy, Peter Timmins, Christine Dodd, Beverly Morrison, Dave Riddell, Wayne Hagerty, Mike Gibbs, John MacDonald, Malcolme Horne, Fred Moerschfelder, Harri Mattila, Cheri Balanko, Morgan Baillargeon, and Mala Murty.

HIGHWAY 7/8 CORRIDOR BETWEEN KITCHENER AND NEW HAMBURG

Salvage excavations continued at several sites on the Highway 7/8 corridor between Kitchener and New Hamburg, including the Blue Dart and Kassel bifurcate base Archaic components; the multicomponent Archaic and Woodland Hunsburger Creek site; and the Late Woodland Sluyter village.

The *Blue Dart* site (AiHd-89), missed by our test pit survey in 1989, was discovered when the proposed right-of-way was surface-examined following logging activities in the spring of 1990. Excavations were limited to 34 square metres, which produced a small but interesting assemblage consisting of one point, and one point preform, a biface/knife, a scraper, and fewer than 200 flakes, some of which were utilized (figure 1). The site appears to be a small, special purpose activity area, perhaps a kill site/butchering station, but the broad range of complete tools could represent, instead, a cache. Together with the nearby Kassel site (AiHd-71), a base camp also attributed to the Bifurcate Base Tradition, these components provide some of Ontario's first excavated assemblages of this cultural affiliation.

The *Hunsburger Creek* site (AiHd-83) is a multicomponent camp used briefly by at least six different Archaic and Woodland groups. Each component is represented by only a few diagnostic points, expedient tools, and lithic debitage, most of which represent tool maintenance. This particular area may have been repeatedly occupied because of its headwater location, perhaps midway along a hunting-foraging circuit.

The late prehistoric Neutral *Sluyter* site (AiHd-82) was discovered in late 1989

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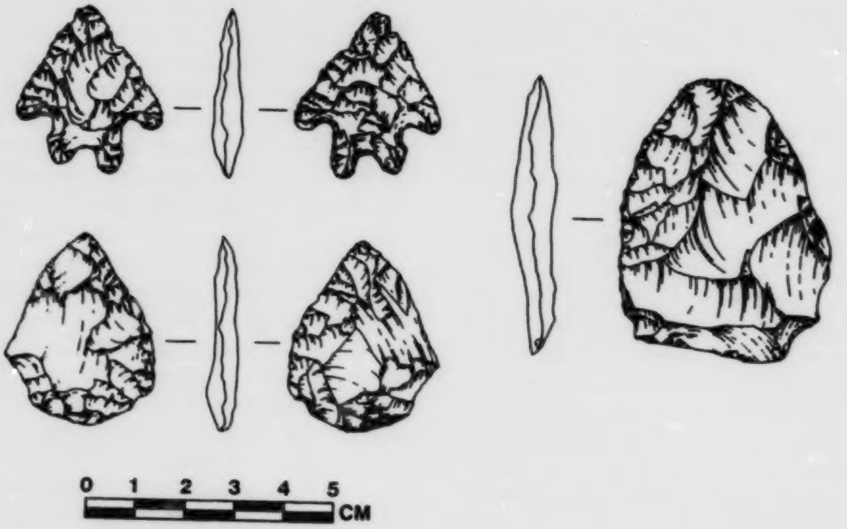

Figure 1: Selected artifacts from the Blue Dart and Kassel site: upper bifurcate base point; lower point preform; right biface/knife (drawings by J. MacDonald)

in a woodlot. An extensive surface collection was made in the spring of 1990 in an attempt to delineate the village boundary. Excavations later in the season removed about 700 square metres of the village edge from the proposed construction zone. These excavations uncovered a number of activity areas and/or small refuse deposits, but no major middens and few subsoil features. Several portions of longhouses were identified, but the village does not appear to have had a palisade.

HIGHWAY 403 CORRIDOR BETWEEN BRANTFORD AND ANCASTER

Archaeological salvage continued on the Highway 403 corridor between Brantford and Ancaster with excavations at the Cooke, Billiard, Baker, Lovering, and Story sites.

The *Cooke* site (AhHb-25) proved to be a small interior camp occupied briefly during the Terminal Archaic period. This plough-disturbed site was systematically sampled through the excavation of 1 metre squares at 5 metre intervals, but yielded few material remains. All diagnostic artifacts, including Meadowood and Hind projectile points and a ground-slate gorget fragment, were recovered from the site surface.

The *Billiard* site (AhHa-76) is a small, plough-disturbed Early Woodland Meadowood component overlooking Big Creek. A total of forty-nine 1-metre squares were excavated, with the highest artifact densities associated with a single subsurface feature. Flotation of the feature fill yielded more than three hundred pieces of micro-debitage, fragments of nut shell, and several small pieces of tooth enamel. The tool assemblage consists of three Meadowood points as well as preforms representing earlier stages of biface manufacture. A surprisingly large number of utilized flakes and scrapers were recovered in the plough zone around the single feature. The site is interpreted as a briefly occupied hunting and processing camp.

Excavations were initiated on the ***Baker*** site (AhHa-77), a small undisturbed proto-historic Neutral village. This work uncovered a rich hillside midden and a complex community pattern including several hearths and associated activity areas; however, major root disturbance and poor post-mould preservation complicated the recognition of house walls. Excavations will continue at Baker in the 1991 season.

The *Lovering* site (AhHa-79) is a small, partially undisturbed late prehistoric Iroquoian component. Limited excavations in the undisturbed woodlot area of the site exposed part of a single longhouse structure. Our expectation is that Lovering is a cabin site similar to those documented in the London area. Further investigations of the site are planned for 1991.

The excavation of the *Story* site (AhHb-26) revealed several features and artifacts associated with an early nineteenth-century Euro-Canadian homestead. There is some suggestion of a histo-ric Native presence prior to the Euro-Canadian settlement, based on the excavated material and the location of the site within the original parcel of land granted to the Six Nations in Haldimand's proclamation of 1784.

OTHER STUDY AREAS

Survey associated with interchange improvements to Highway 126 in the Pond Mills area east of London identified three sites: ***Bradley Avenue***, and ***Pondview I*** and ***Pondview II***. Mitigation of the late prehistoric Iroquoian Bradley Avenue site (AhHh-160) was initiated during the 1989 season with the excavation of a small concentration of plough-disturbed refuse. At the commencement of construction in April 1990, exploratory trenches were extended in search of house patterns. This excavation uncovered two substantial longhouses, one of which measures 54 metres in length.

Archaeological survey of a proposed new alignment of Highway 86 north of St Jacobs produced a few isolated finds and a small Princess Point camp to be investigated at a future date. In addition, survey was started on the proposed Leamington Bypass and will continue for several seasons.

In preparation for the proposed twinning of the Highway 12 bridge over Atherley Narrows, and with the generous assistance of the Canadian Parks Service during their investigations of the fish weirs located there, a crew of divers led by Jim Ringer also conducted a survey of the bottomlands in the vicinity of the proposed structure. Twelve wood samples from six weir stakes were submitted to two radiocarbon laboratories and they confirm the use of weirs in the narrows for more than 4000 years. One stake was extracted towards the west end of the bridge from a short alignment of stakes identified by Johnston and Cassavoy in the 1970s. Two wood samples from this stake were dated at 320±70 BP (Brock) and 190±70 BP (Saskatchewan) indicating a relatively late date for this alignment. Plans are now being formulated to conduct more intensive underwater investigations in the vicinity of the proposed structure.

As a final note, a number of changes are taking place at the Office of the Regional Archaeologist. Several computers are now being used to assist in the process of archaeological analysis and reporting. One computer is equipped with Autocad and we are attempting to link dBASE artifact catalogues with Autocad to map artifact distributions. In addition, four new full-time staff positions have now been filled by Christine Dodd and Peter Timmins (assistant archaeologists) and by Beverly Morrison and Wayne Hagerty (archaeological technicians).

CONSULTING ACTIVITIES OF ARCHAEOLOGICAL SERVICES INC.

Eva MacDonald, Robert Pihl, and Ronald Williamson

Archaeological Services Inc. (ASI) is an archaeological consulting firm, incorporated in 1980, and operated under the general direction of Dr Ron Williamson. Its office in Toronto, under the direction of Williamson and Martin Cooper, conducted over eighty predevelopment assessments, which resulted in the registration of ninety newly discovered archaeological sites. Detailed investigations were conducted on approximately thirty sites. The Southwestern Ontario/Utilities division in London, Ontario, under the direction of Robert Pihl, conducted nine predevelopment assessments and six mitigative investigations. In addition to twenty permanent staff members, fifteen people were employed seasonally on projects throughout southern Ontario.

SALVAGE EXCAVATION OF THE PARSON SITE

In June, excavations were completed at the Parson site (AkGv-8), a Late Iroquoian village situated on a level plateau overlooking Black Creek in North York, Ontario. Under the field direction of Dr Bruce Welsh, an 18-metre-wide trench initiated in 1989 (Williamson 1990, 114) was extended 70 metres to the east effectively to bisect the site. While excavations revealed a seven-row palisade at the break-in-slope on the eastern side of the village, only a single row of palisade was found about halfway down the steep slope on the west side of the site. Seven of the ten documented longhouses are oriented on a northwest-southeast longitudinal axis, and wall trenches (Kapches 1980) characterize many of the house walls. The remaining houses are oriented parallel to the palisade on a northeast-southwest axis. A total of 244 pit features were excavated, including three semi-subterranean sweatlodges (MacDonald 1988), two of which were associated with a short, 5-metre-wide house. A total of four midden areas were identified; three were shallow, and it would appear that because of extensive plough disturbance, only basal elements remained. The fourth midden was associated with the eastern palisade and yielded a rich artifact assemblage.

The results of the preliminary analysis of 150 ceramic vessels is consistent with previous studies which suggest that the

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site dates to between AD 1500 and 1550 (Wright 1966; Ramsden 1977).

SALVAGE EXCAVATION OF THE WILCOX LAKE SITE

Under the field direction of Dr Shaun Austin, a crew of five conducted salvage excavations at the late Early Iroquoian Wilcox Lake site (AlGu-17), located on a level terrace adjacent to a small kettle lake in Richmond Hill, Ontario. Data on community patterning were recorded in advance of sewer-line construction within a 5 by 85 metre trench. The pattern of post moulds, interior and exterior features, and intramural hearths suggest the presence of four or more longhouses oriented on an east-west longitudinal axis. A portion of one of the longhouses had previously been documented by ASI in 1988 (Williamson 1990, 75).

The recovered ceramic assemblage, which includes three almost completely reconstructed vessels, consists of only collarless wares decorated by either several rows of linear stamped or cord-wrapped stick obliques or interrupted horizontals, suggesting that the site dates to the late thirteenth century. This community may have been established by the movement of people who resided earlier along the north shore of Lake Ontario, and probably represents the earliest Iroquoian community in York Region. The community may also have been ancestral to later Iroquoian peoples in the region.

ARCHAEOLOGICAL ASSESSMENT OF A PORTION OF THE SHEGUIANDAH SITE

ASI was retained to conduct an archaeological resource assessment of three potential locations for a water-treatment facility within the Township of Howland. Part of the assessment involved determining the degree to which the Sheguiandah site, a complete multi-component quarry and workshop situated on a large outcrop of white quartzite on the northeastern shore of Manitoulin Island in Lake Huron, extended onto two of the proposed facility locations. Since the site is recognized to be of international significance and is designated under Part IV of the Ontario Heritage Act, a permit was obtained from the Minister of Culture and Communications to conduct that portion of the assessment involving designated lands.

Dr Patrick Julig of Laurentian University was retained to direct the survey, which focused on the southeast face of a large hill adjacent to Sheguiandah Bay. The subject lands sloped from northwest to southeast towards the bay, dropping about 14 metres in elevation, although the slope is interrupted by a level beach terrace of Nipissing age (6000–5000 BP). Test units were placed systematically across the 30-metre-wide terrace and a narrow pathway was surface collected. The recovered assemblage includes quartzite cores, flakes, shatter fragments, and the basal portion of an Archaic side-notched projectile point. Cultural material was also documented in four separate areas below the ridge, along the shore of Sheguiandah Bay. In the absence of diagnostic artifacts, the proximity of the artifacts to the modern shoreline suggests that these knapping areas were used relatively late in the sequence of prehistoric exploitation of quartzite from the Sheguiandah quarry.

ASI has also assembled an expert team including Dr Julig, Dr Peter Storck of the Royal Ontario Museum, Dr Derek Coleman of Gore & Storrie Limited, and John Nicks and Ted Silverberg of Lord

Cultural Resources Planning and Management to carry out a master plan of archaeological resources for the Township of Howland, the Ojibways of Sucker Creek, and the Sheguiandah First Nation. This is a multiphased study that involves an archaeological survey of the township and reserve lands, limited excavations on the Sheguiandah site, designing strategies for addressing archaeological concerns in the land development process, and planning for the conservation and interpretation of cultural resources.

ARCHAEOLOGICAL ASSESSMENT OF THE IRELAND HOUSE ESTATE

During the month of June, excavations were completed under the direction of Dr Welsh at the Ireland House Estate (AiGw-205), situated in the City of Burlington. The focus of the investigation was a two-storey fieldstone house, more familiarly known as Oakridge, that had been built for Joseph Ireland in the late 1830s and had been occupied continuously by his descendants until 1985. The purpose of the assessment was to identify and describe the archaeological resources present in a number of locations, including a 2-metre-wide area long the south and west walls of the house where drainage tile was to be replaced. The removal of the dirt floor of the original basement kitchen was also monitored.

A substantial assemblage of nineteenth-century artifacts was recovered during the excavations. Transfer-printed wares accounted for 65 per cent of the decorated ceramic assemblage, suggesting that the Ireland family was of sufficient means to satisfy their preference for one of the more expensive ceramics available, particularly the Blue Willow pattern. Analysis of the assemblage from units adjacent to the south face of the house suggests that weeping tiles were first laid in the late nineteenth century. This conclusion is based on the recovery of late nineteenth-century ceramics from all levels within the trench fill. Previously it was thought that weeping tiles had been initially installed in the 1840s when the house was expanded.

SALVAGE EXCAVATION OF THE WIACEK AND HUBBERT SITES

Salvage excavations were conducted by a crew of four under the field direction of Richard Sutton at two Iroquoian sites situated in Barrie, Ontario. Owing to rapid industrial development around the Wiacek site (BcGw-26), it became necessary to excavate that portion of the site that had not been salvaged by Paul Lennox in 1983 (Lennox et al. 1986). Settlement data for three complete longhouses were recorded, one of which was 45 metres long and situated 10 metres east of Lennox's Houses 1 and 2. The two remaining structures occurred further east and south of the first house and were both small and elliptical in shape. A large plough-disturbed midden was also found on the break-in-slope in the woodlot to the south of the longest house. As with the initial excavation, no evidence of a palisade was found.

Excavations were also conducted at the Hubbert site (BbGw-9), located approximately 700 metres to the south of the Wiacek site. A property boundary traverses the site, and both sides were subjected to a controlled surface collection prior to the salvage excavation of approximately one-third of the site area. While two complete longhouses and a portion of a third were documented, no evidence of a palisade was encountered. Although the houses were of varying sizes, they were all oriented on a northwest-southeast longitudinal axis. A small but very rich midden was also documented approximately 10 metres south of these houses. Also striking is the number of semi-subterranean sweatlodges (MacDonald 1988) that were found within or appended to the houses; seventeen of these features were documented in association with the three longhouses.

Perhaps the most interesting artifact recovered from both excavations is a finely crafted human female effigy pipe found in the context of a sweatlodge living floor within House 1 (figures 1 and 2) at the Hubbert site. The head of the effigy had been broken off and the facet ground smooth, indicating that the pipe had likely remained in use after being broken. A small complete vessel (figure 3) was also found within a pit feature near the end of House 1.

As both of these sites represent fairly early, possibly sequential components of the Middle Iroquoian occupation of the Simcoe Uplands area, the analyses of the site assemblages and data on community patterning will focus on the evolving nature of community layout and subsistence activities in the region.

STAGE 3 INVESTIGATION OF THE HOUGHTON OSSUARIES

The Houghton ossuaries (BeGw-2, BeGw-41) were first reported in detail by Andrew F. Hunter (1900, 71–2), who referred to them collectively as Tay Township Site Number 10 (John Houghton's). Following a stage 2 assessment conducted by ASI in 1989 and pursuant to consultation with Chief William Montour of Six Nations Council, Dr Williamson directed excavations of the two sites. The larger of the two ossuaries (BeGw-2) consisted of a circular depression approximately 6.9 metres in diameter. In the centre of the depression, a 5-

Figure 1: Front view of female effigy pipe from the Hubbert site (BbGw-9), Barrie, Ontario

Figure 2: Back view of female effigy pipe from the Hubbert site (BbGw-9), Barrie, Ontario

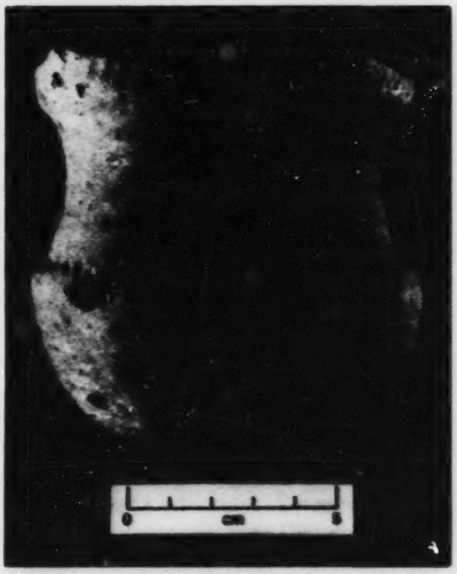

Figure 3: Complete miniature vessel recovered from the Hubbert site (BbGw-9), Barrie, Ontario

metre square test unit was excavated to a depth of 86 centimetres. Almost two hundred fragments of human bone and twenty-seven fragments of brass or copper, including a possible knife, were found in discrete concentrations throughout the fill. The bone exhibited evidence of weathered postmortem fractures, and the fill was loosely packed, mottled topsoil and subsoil suggesting that the ossuary had been looted previously. All of the human bone and artifacts were reinterred subsequent to the investigations. The ossuary is now registered with the Ministry of Consumer and Commercial Relations and will be protected from further disturbance. The smaller ossuary was found to be severely disturbed and contained modern refuse. Despite the use of a fine mesh screen to sort the fill, no human bone was encountered.

SALVAGE EXCAVATION OF THE BANKS SITE

The Banks site (BcGv-16), a historic Afro-Canadian homestead, was discovered during a stage 2 assessment of the proposed Oro-Barrie-Orillia airport property situated northeast of Barrie. The site was subsequently salvage excavated under the direction of Martin Cooper. This research was conducted because archival documentation suggested that the site represented the brief occupation of Joshua and/or Enos Banks, two brothers who were tenants on the property between 1870 and 1878. The 1871 census of Oro Township listed Enos Banks as a mulatto farmer of African origin and further references to the Banks family may be found in the book *Men of Colour* (French 1978), a historical account of the black settlement of Oro Township.

Despite the removal of topsoil by gradall across the entire site area, only a stone-lined well and four small pit features were documented. It is nevertheless hoped that the analysis of the site assemblage will contribute to our understanding of this chapter in Ontario history.

MITIGATION OF SITES LOCATED ON HYDRO TRANSMISSION LINE

During the spring of 1990, test excavations were conducted on two sites located in 1989 as a result of a survey of selected portions of Ontario Hydro's proposed Nanticoke GS x Longwood TS transmission line.

The Ardea site (AfHa-170) is located along Sandusk Creek at an outcrop of Onondaga chert. A detailed controlled surface collection of the site and limited excavations at the tower base, conducted under the direction of Deborah Pihl, yielded Archaic projectile points and considerable quantities of material associated with both reduction of crude preforms and tool refurbishing.

The Dumetella site (AeHe-34) is situated immediately adjacent to a small swamp, approximately ten kilometres northeast of Tillsonburg. Test excavations, conducted under the direction of Robert Pihl, revealed evidence of the mid section of a longhouse dating to the mid fourteenth century. While the fourteen recovered vessels are clearly Middle Iroquoian in nature, they also display some distinctive attributes that may relate to the expression of a regional ethnic identity.

TEMAGAMI PLANNING DISTRICT HERITAGE PLANNING STUDY

In association with Unterman McPhail Cuming Associates and Algonquin Associates, ASI was contracted by the Ministry of Natural Resources to undertake and coordinate a comprehensive study of heritage resources within the Temagami Planning District. This pioneering project, under the direction of Robert Pihl, had several important objectives: to identify the relevant heritage themes; compile an inventory of archaeological sites, traditional use sites, built features, and cultural landscapes; develop site potential models for prehistoric and historic aboriginal sites and historic Euro-Canadian sites; identify significant heritage values within the planning district; and develop a preliminary set of resource use options. The study should provide valuable input to and guidelines for future environmental assessments under the Timber Management Programme.

ARCHAEOLOGICAL MONITORING OF THE BUTLER'S BARRACKS SITE

A 1989 assessment of a proposed subdivision in Niagara-on-the-Lake resulted in the discovery of early nineteenth-century deposits, which historical documentation suggest may be associated with the nearby Butler's Barracks, a War of 1812 military facility. Archaeological monitoring of the site in 1990, in advance of ditch construction, resulted in the discovery and subsequent documentation of a structure that appeared on an 1819 map of the military reserve. Identified as a military hut, this rectangular structure measured 2.5 by 6.9 metres, featured a slab stone and mortar foundation, and was located in the lowest and wettest part of the reserve. Although its function remains unknown, some architectural attributes suggest that it may have been a cistern or well.

MONITORING OF THE IVORY HILL SITE

As a followup to an archaeological survey of its proposed transmission line from Bruce NPD x Longwood TS, Ontario Hydro contracted ASI to monitor the impact to an archaeological site of the construction of an access road and restoration to original surface condition. The Ivory Hill site (AfHj-9), located on the Caradoc Sand Plain, Middlesex County, was selected for the exercise. The site was originally discovered by Dr Brian Deller, and has multiple components, dating to the Paleoindian, Late Archaic, and Early, Middle, and Late Woodland periods. Test trenches were excavated under the direction of Deborah Pihl, in advance of and subsequent to road construction, and after restoration had been completed. Off-road test trenches were also excavated within the site to provide a control for the observed impact. The results of the excavations indicate that despite the precautions taken to preserve the site, limited compaction occurred with the construction of the road, and restoration processes resulted in subploughzone disturbance. These data will serve to assist Ontario Hydro in providing better mitigative techniques, so that construction impact on archaeological resources will be minimized.

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FIELDWORK OF THE HAMILTON-WENTWORTH ARCHAEOLOGICAL FOUNDATION

Rita Michael

The Hamilton-Wentworth Archaeological Foundation is an incorporated charitable organization. Its objectives are to provide a visible archaeological presence in the region by supporting responsible archaeological resource management and to establish an archaeological data base and artifact repository. The foundation limits itself to regional projects for nonprofit heritage agencies. Detailed investigations were completed for the Victoria Inn (AhGw-82) and for Griffin House (AhHa-128) during the 1990 field season.

VICTORIA INN

In 1989 the foundation was asked by the Red Hill Creek Expressway Project (Hamilton-Wentworth Region) to undertake the assessment of a property reputed to have operated as the Victoria Inn during the nineteenth century. The house, at 158 Mud Street, stood at the top of Mount Albion Hill, City of Stoney Creek, and was scheduled to be demolished to make way for an expressway interchange. The house was torched twice before it was finally dismantled and saved, mainly as a result of efforts by the foundation.

The project (AhGw-82) was designed and directed by Rita Michael, with a staff of four and several foundation volunteers. The assessment included an education component, to allow foundation members to learn basic field archaeology techniques. Testing was carried out during the last week of October 1989. Public records research corroborated the identity of the house as the Victoria Inn, which operated between 1851 and 1881. Gaps in the public records before 1877 prevent assigning a pre-1851 date for the inn, although archaeological evidence suggests the site was occupied in the 1830s. Daniel F. David, tanner, bought part of Lot 34, Concession 7, Saltfleet Township, on 30 May 1851 (Instrument A246). The lot was patented to William and James Crooks in 1806. John Secord bought most of Lot 34 in 1834 from the Crooks brothers, who had already sold a small section at the northeast corner of the lot to James Stewart, merchant, in 1830. It is possible that Secord built an inn at the junction of the two roads in the 1830s, but there are no records to substantiate this possibility.

Fifty test holes were excavated over a controlled grid as well as a long trench

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(B) at the front of the house where a well was located. The stratigraphy indicates that the site had been disturbed many times. The rubble foundation of the house was poorly constructed and both trenches at the southeast and southwest corners indicate that it had been repaired in this century. A kitchen behind the house was also removed sometime after the mid-1930s, but whether it was contemporaneous with the inn has not been established. A cistern and the edge of a privy were also uncovered at the back of the house.

Artifact assemblage totalled 2419, with glass and ceramics each accounting for 41 per cent of the total. White earthenware made up 37 per cent of the ceramic assemblage, and ironstone, 26 per cent. Interestingly, 180 shards of local redware were recovered (18 per cent), representing the third largest component of the total assemblage. The presence of redware suggests an early nineteenth-century occupation. The remainder of the assemblage included tobacco pipes (5.1 per cent), stoneware (3.4 per cent), porcelain (2.6 per cent), yellow ware (2.5 per cent), buffware (2.2 per cent), pearlware (0.8 per cent), and bone china (0.6 per cent).

Window glass accounted for 34.5 per cent of the glass assemblage, with the balance of the assemblage classified as nonwindow. The nonwindow glass includes a number of tumbler fragments.

Faunal analysis was carried out by Dr David Black. The faunal assemblage consists of 65 per cent mammal, 17 per cent bird, and 17 per cent fish. Mammals include cattle, sheep, swine, a cottontail rabbit, rat, and mouse. Domestic birds include chicken, turkey, and duck. Fish are represented by ***Esocidae***, ***Centrarchidae***, and ***Salmonidae***. Butchering marks include knife, chop, and saw cuts. Total weight of the faunal assemblage is 1.085 kilograms.

Additional archaeological work has been recommended and a funding request submitted to support the analysis of the glass assemblage and prepare the report for publication. The timber frames of the inn have been stored for possible reconstruction.

GRIFFIN HOUSE

The Griffin House is located on Lot 40, Concession 1, Ancaster Township, and is owned by the Hamilton Region Conservation Authority. The 50-acre site was purchased by Enerals Griffin, a reputed escaped black slave from Virginia, in 1834. The site may have been occupied by another house at an earlier time, because some of the artifacts could support a pre-1830 date. The Griffin House, which was originally clapboard, was later covered with board and batten, and was stuccoed in the twentieth century.

The investigation of the Griffin House (AhHa-128) was directed by Rita Michael, with a staff of five students supplemented by the occasional volunteer. The assessment concentrated around the house, the orchard, privy areas, and barn/shed area to the north. Test squares were dug along the east, west, and south walls of the house and a trench was dug across the back of the house behind the kitchen.

The house foundation was unusually constructed in that the stones had been laid from the inside and on a batter (a slope from vertical on a wall to increase stability). The foundation is in fairly good shape, except for a poor-quality mortar that had fallen out in many places, leaving gaping holes. The c.1950s kitchen addition was poorly constructed and was already deteriorating.

Fifteen squares of varying size were excavated, with uneven results. Most of these squares produced nothing more than building debris. The bulk of the artifacts came from those test units nearest the house. It is evident from this work that the site had been disturbed at least twice, once or twice during the nineteenth century and again in this century. Test Square A.a appears to have caught the edge of either a privy or a refuse pit that had not been disturbed in the twentieth century.

The artifact assemblage totals 2330, with 45 per cent glass, 24 per cent ceramic, 17 per cent metal, and 12 per cent zoological. More than half the glass assemblage of 1056 shards is window glass, which represents or appears to represent the three main technological advances in glass-making of the nineteenth century. This assemblage must be studied further. White earthenware accounts for 42 per cent (231 objects) of the total ceramic assemblage (549 objects), and ironstone 19 per cent (105 objects). Other artifacts include clay pipes (8 per cent), porcelain (5 per cent), stoneware (3 per cent), pearlware and creamware (2.5 per cent each), and bone china (less than 1 per cent). The forty-five clay-pipe fragments included some anthropomorphic examples and specimens marked "Henderson of Montreal." These specimens indicate a pre-1876 date, since after that date Henderson's nephew, William Henderson Dixon, bought the pipeworks. A shamrock decorates another pipe fragment, but since the other part of the bowl is missing it is not known whether the sailing ship *Shamrock* was represented. Obviously, one of the Griffin family enjoyed a good smoke. In addition to the artifacts mentioned above, two brass sleigh-bells and part of a jet brooch were also recovered. Jet is a hard black stone that was mined in Yorkshire, England, and was popular during the late Victorian period for costume decoration.

The faunal assemblage of 286 pieces was examined by Dr David Black but not formally analysed. The material consists of butchered domestic mammal remains and a woodchuck skeleton, which was recovered near the house foundation.

Based on the results of the assessment, additional archaeological work is recommended, especially since the Conservation Authority intends to restore the house. Topographical and architectural drawings are needed, and the artifacts, which are the key to understanding site dynamics, should undergo further study.

ACTIVITIES OF PARKER ARCHAEOLOGICAL CONSULTING

L.R. Bud Parker

Parker Archaeological Consulting did only a small amount of fieldwork in 1990. Four archaeological sites were registered with the Ministry of Culture and Communications. These sites were originally discovered by the licensee several years ago in Caradoc Township, Middlesex County, and range in age from the Late Archaic to the late nineteenth century.

The *Carey-Chambers* site (AeHi-42) is a nineteenth-century historic site (c.1828–85) located on the flood plain of the Thames River near the present hamlet of Muncey. The site is significant for two reasons: it represents one of the earliest Euro-Canadian farms in this part of Caradoc Township; and the first settler, John Carey, was an Anglican missionary who founded a mission school at the site in 1828 for the local Native communities, consisting of Chippewa, Muncey, and Oneida peoples. In 1849 the mission was moved to its present location at "Mount Elgin" on the nearby Caradoc Reserve.

The *Higgs* site (AeHi-43) is also a nineteenth-century historic site and represents the first occupation (1864) of Lot 1, East Side, Muncey Road, in Caradoc Township. The site is situated on a sandy knoll approximately 1 kilometre north of the Carey-Chambers site.

The *Rookery* site (AeHi-44) has produced surface artifacts that are diagnostic of both Late Archaic and Early Middle Woodland cultures. Artifacts recovered include one-half of a banded-slate bannerstone, two Adena/Robbins-type projectile points, plus numerous Onondaga chert flakes. The site is on a small sandy knoll within 50 metres of a swamp that is presently home to a large great blue heron rookery. The Rookery site was partially destroyed thirty years ago by bulldozing activity on the top of the knoll.

The *Windy Day* site (AfHi-132) is a lithic chipping station situated on a small clay ridge, located between the Thames River and an unnamed creek. Artifacts recovered include one side-notched projectile point and thirty-one chert flakes. Eight of the flakes are of Flint Ridge chalcedony, while the remainder are of Onondaga chert from secondary sources. The site was originally thought to date from the Late Archaic period. Subsequent examination of the artifact material

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(particularly the projectile points and chert types; J. Wilson, personal communication) suggests a Middle Woodland rather than Archaic affiliation.

These four sites represent a small percentage of the cultural resources in the area. Only a few archaeological surveys have been completed in this portion of Caradoc Township, an area bounded by Highway 2, the Thames River, and Ekfrid Township, which is referred to locally as "South Caradoc."

CONSULTING ACTIVITIES OF SETTLEMENT SURVEYS LIMITED IN NORTHERN ONTARIO

John Pollock

In 1990 Settlement Surveys Limited completed a number of archaeological impact assessments. Projects were undertaken at or near Niagara Falls, Lake Temagami, Larder Lake, Abitibi River, Highway 560, Sault Ste Marie, Summer Beaver, Thunder Bay, Fort Francis, and Kenora. Although a total of eleven projects involving both field and heritage planning work were completed, only the five most interesting are described in this report.

HERITAGE INVESTIGATIONS FOR TEME-AUGAMA ANISHNABAI FIRST NATION

In late 1990 a multiyear program of archaeological, historical, and cultural sites and features assessment and inventory was initiated by the Teme-Augama Anishnabai Executive Council. Initially the project involved the assessment of the potential impact of forestry operations on cultural resources within twenty-nine townships. Information was obtained from elders by Anishnabai researchers, with assistance from Settlement Surveys Limited. We also prepared a Geographical Information System of digitized computer maps and files for each of the townships, all of which are located in the Lake Temagami area. This system was designed to provide maximum flexibility to allow for revisions, additions, and/or deletions of heritage recommendations concerning present and future cutting operations in each township. Reports were prepared to provide guidelines for the stewardship of heritage resources in the n'Daki-Menan (110 township land caution/land claim area). These guidelines are intended to supplement those presented in the draft Timber Management Guidelines for the Protection of Heritage Resources (Ontario 1989).

ARCHAEOLOGICAL AND HERITAGE STUDY OF HIGHWAY 560

John Pollock, assisted by Mike O'Connor, undertook a field assessment of Highway 560 between Gowganda and Shining Tree (figure 1). A total of seven heritage sites were recorded, including two prehistoric sties, CjHh-1, on the proposed right-of-way at the West Montreal River, and CjHh-2, at the Michiwakenda Lake Crossing. The first-mentioned site, CjHh-1, was located on the centre line of the

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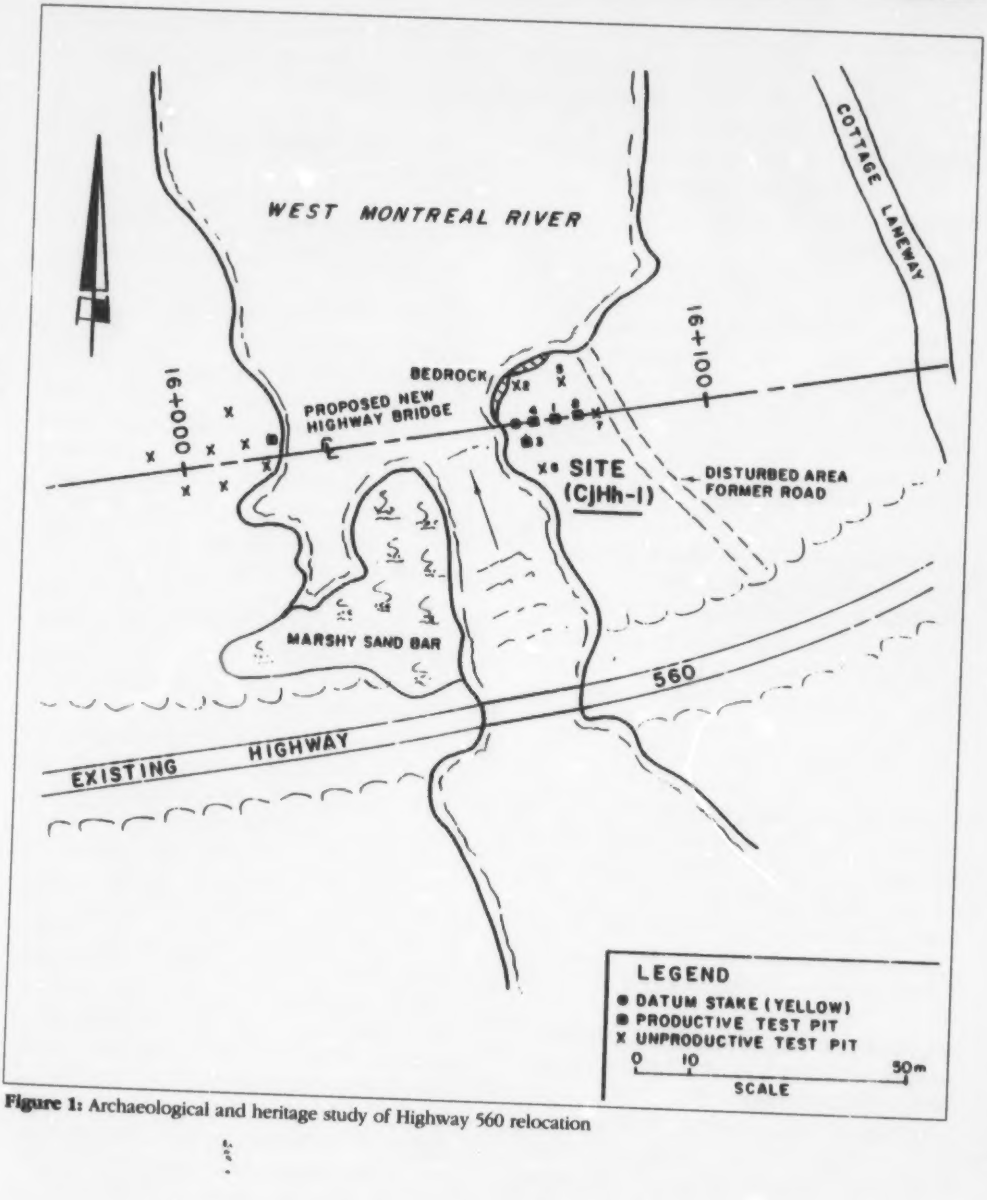
WEST MONTREAL RIVER
COTTAGE LANEWAY
16+100
16+000
BEDROCK
PROPOSED NEW HIGHWAY BRIDGE
SITE (CjHh-1)
DISTURBED AREA FORMER ROAD
MARSHY SAND BAR
560
EXISTING HIGHWAY
LEGEND
● DATUM STAKE (YELLOW)
● PRODUCTIVE TEST PIT
X UNPRODUCTIVE TEST PIT
0
10
50m
SCALE

Figure 1: Archaeological and heritage study of Highway 560 relocation

proposed new right-of-way (figure 1). At both this and the other prehistoric site (CjHh-2), Settlement Surveys recommended that further work consisting of controlled test excavations be undertaken to allow for a more comprehensive assessment of the age and nature of the cultural materials.

Five historic archaeological sites or features were recorded on the East Montreal River, Duncan/Mosher lakes, Porphyry Lake, and Jesse James Creek and Lake (CjHe-6, CjHe-5, CjHh-3, CjHg-1, and CjHf-4). These sites include, respectively, a cemetery, concrete foundation and flume, log cabins, and a former white pine sawmill site.

HERITAGE IMPACT ASSESSMENT OF THE PROPOSED DAM AND RESERVOIR AT LONG SAULT RAPIDS

The project consisted of an assessment of the impact on heritage resources of a 14.5 megawatt hydroelectric project that would flood some 35 hectares of land along a 10 kilometre stretch of the Abitibi River. The dam site is to be located at Long Sault Rapids, 19 kilometres north of Cochrane, Ontario. Three heritage sites were recorded (DhHg-2, DhHf-1, DfHe-1), consisting of a portage, cache pits, and an early open pit mine. None of these sites is considered to be of significance and no further work was recommended.

ARCHAEOLOGICAL ASSESSMENT OF PROPOSED RIVER CROSSINGS, FORT FRANCIS, ONTARIO

John Pollock undertook a field assessment of two proposed river crossings (Trout River and Little Turtle River) by logging roads in the Fort Francis area. No buried sites were located, but some relatively recent (1950s) materials dating from the horse logging period were found on the surface.

ARCHAEOLOGICAL ASSESSMENT OF THE PEARL BEACH SITE, LARDER LAKE, ONTARIO

In 1907 a well-known Canadian newspaper editor, Charles Bramble, described Pearl Beach as being "one of the most perfect camping grounds in the White River country" (Bramble 1907). This statement is as valid today as it was then. Pearl Beach has attracted people from the time of final deglaciation. Previous archaeological investigations indicated that Pearl Beach was occupied as early as five thousand years ago and perhaps even earlier. Our recent investigations indicated that the site was occupied by groups from all of the Native cultures known to have been in the area from postglacial times through to this century. In additional, recreational canoe trippers, gold prospectors, and, of course, Thomas Pearl, who built a store and gave his name to Pearl Beach, have all enjoyed the natural beauty of the area in historic times (Pollock 1976; Nobel 1979).

Although no new archaeological excavations or testing were undertaken at the Pearl Beach site (DaGv-1) in 1990, a contour map of the site showing areas excavated previously by John Pollock in 1973 and W.C. Noble in 1979 and the glacial boulder complex was prepared by a team of Ontario Land Surveyors under Pollock's direction. As well, ethnological work was completed, including a site assessment by Fred Pine, a ninety-six-year-old elder and Ojibwa medicine man from the Garden River Reserve. Fieldwork on the origins of the "mystery rocks" (figure 2) or boulder field found close to the archaeological site near the beach, and thought by some to be a cultural alignment or pattern, was conducted by two geologists from the Ontario Geological Survey and a consulting

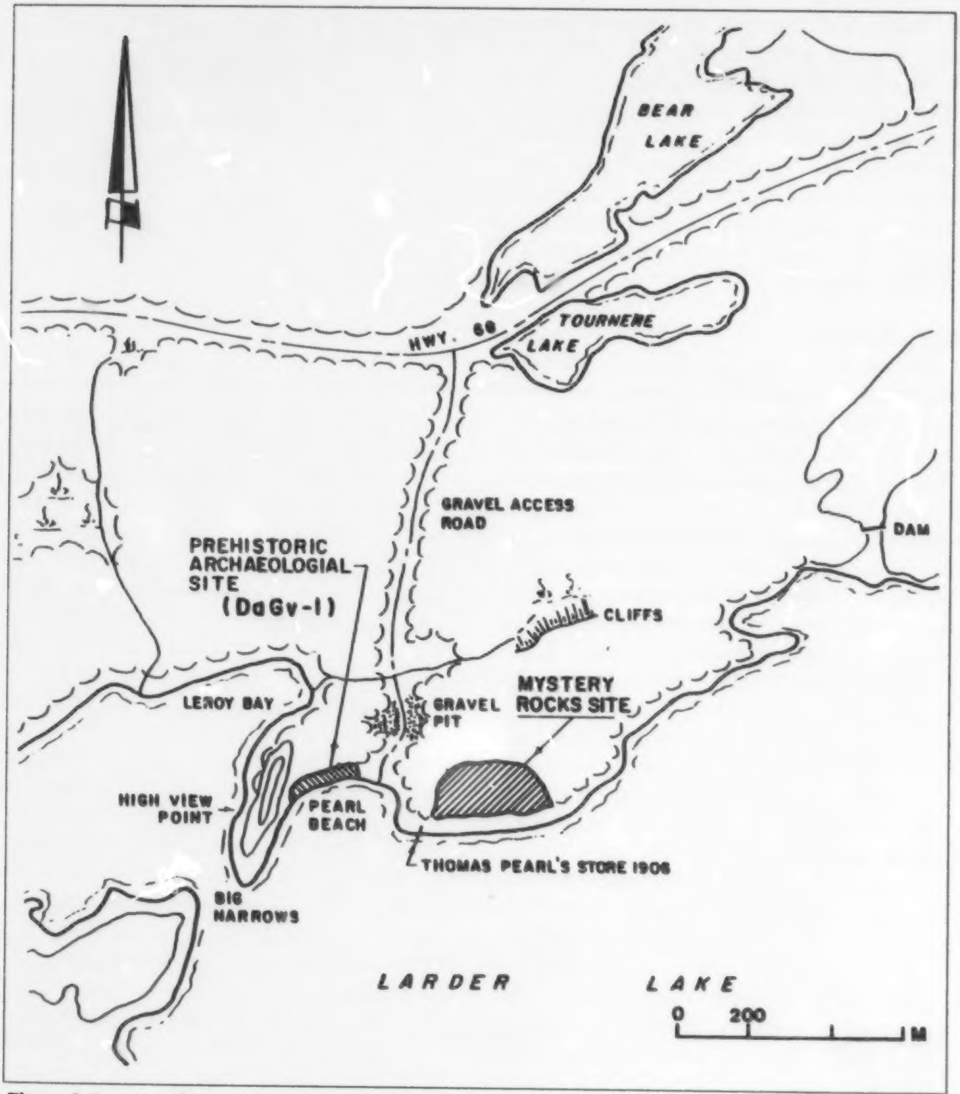
BEAR LAKE
HWY. 66
TOURNENE LAKE
GRAVEL ACCESS ROAD
DAM
PREHISTORIC ARCHAEOLOGIAL SITE (DaGv-1)
CLIFFS
LEROY BAY
GRAVEL PIT
MYSTERY ROCKS SITE
HIGH VIEW POINT
PEARL BEACH
THOMAS PEARL'S STORE 1906
BIG NARROWS
LARDER LAKE
0
200
M

Figure 2: Location of the Pearl Beach site, Larder Lake, Ontario

geologist. Unfortunately, this work did not produce any evidence that the "mystery rocks" are anything more than a natural, although intriguing, random scattering. Despite this, the Pearl Beach prehistoric campsite, the "mystery rocks," and the archaeological investigations are of provincial interest and could easily be utilized as a major historic and cultural tourism attraction.

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MINISTRY OF TRANSPORTATION: ARCHAEOLOGICAL INVESTIGATIONS IN THE CENTRAL REGION, ONTARIO

Gary Warrick

During the winter of 1989–90 Gary Warrick and assistant Jeff Bursey carried out the analysis of material from the 1985 Ministry of Transportation (MTO) excavations at the Middleport site (AgHa-2) in Brant County. Excavations at that site were necessitated by improvements to Highway 54. The report is in preparation.

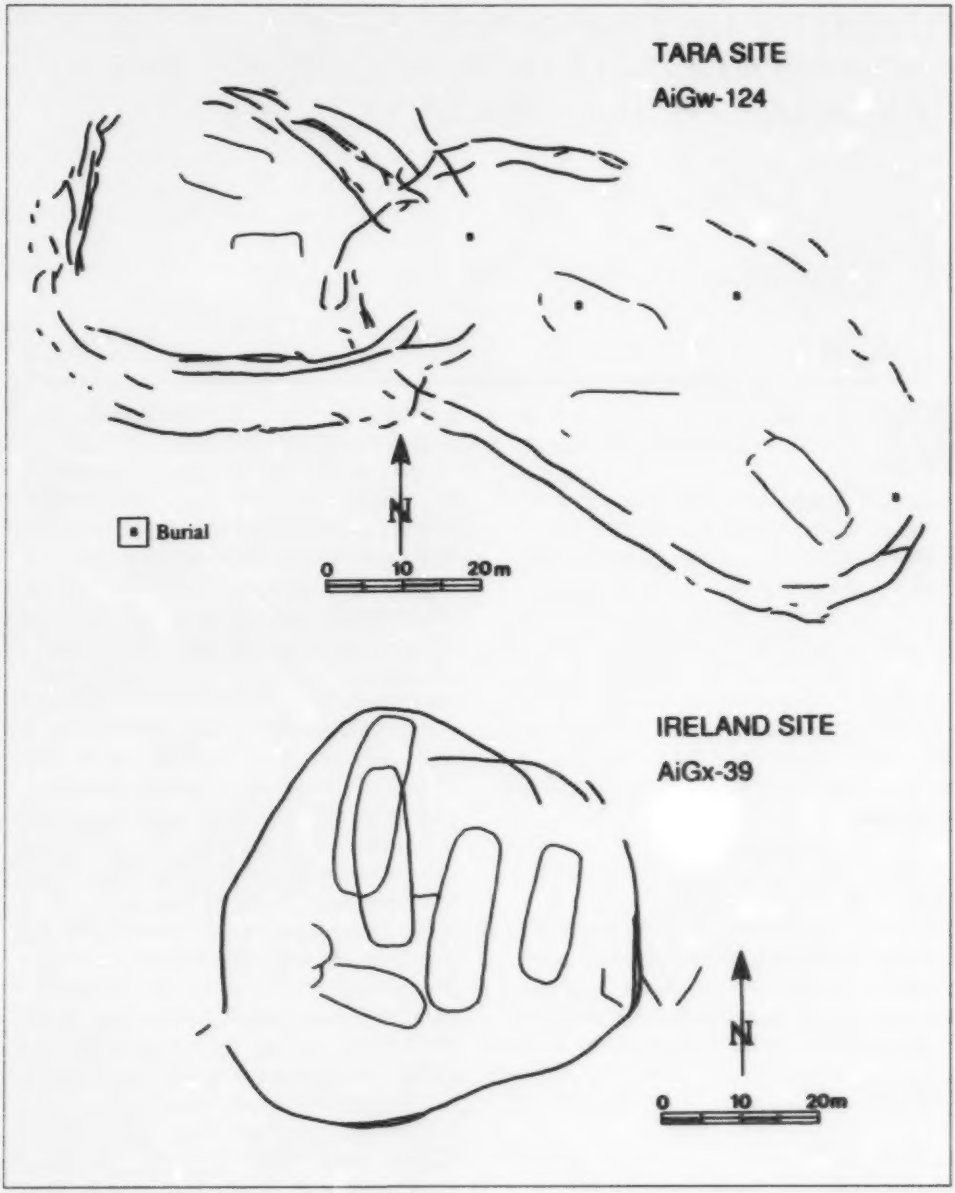
In the fall of 1990, Archaeological Services Inc. completed an analysis of the 1984 MTO excavations at the Myrtle Blacksmith Shop site (BaGr-23), located on Highway 7/12, Regional Municipality of Durham.

In 1990 a number of minor highway corridors were surveyed and several archaeological sites were discovered, primarily nineteenth-century domestic sites and small lithic scatters. Survey work continued on Highway 6 (New) (Regional Municipality of Hamilton-Wentworth) and Highway 407 (Greater Toronto Area).

EXCAVATION OF THE TARA AND IRELAND SITES

Mitigative excavations were conducted at the Tara (AiGw-124) and Ireland (AiGx-39) sites, located in the future Highway 403 right-of-way in Burlington, Ontario (figure 1). Rosemary Prevec served as field director. Ploughzone was removed by gradall, and village patterns were recorded and excavated. The Tara site witnessed two Early Iroquoian village occupations, both about 0.3 hectare in size and dating to the early thirteenth century, based on ceramic seriation. Unfortunately, the village was located on a clay ridge, and years of deep ploughing has destroyed many of the house patterns. Dry clay soils posed further problems in recovering house patterns. Portions of five longhouses and four burial pits were uncovered. Two burial pits had been exhumed prehistorically (containing at the time of excavation only tiny bones and teeth), the third pit contained the remains of five individuals, and the fourth pit held the flexed remains of an adult (Linda Gibbs and Carol Lang, personal communication 1990). The human bone was studied and then reinterred at the request of the Six Nations.

Ontario Ministry of Transportation, 5th Floor, Atrium Tower, 1201 Wilson Avenue, Downsview, Ontario, M3M 1J8
Consulting Licence 90-018


TARA SITE
AiGw-124
● Burial
N
0
10
20m
IRELAND SITE
AiGx-39
N
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10
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Figure 1: Village plans of the Tara and Ireland sites

The Ireland site, located 450 metres northeast of the Tara site, contained the remains of a late thirteenth-century Iroquoian village. Five longhouses were delineated surrounded by a single-row palisade, enclosing an area of 0.3 hectare. During the occupation of the village, one house was moved and rebuilt at another location. No burials were encountered at this site. Ongoing analyses of the Tara and Ireland sites will provide new information on Early Iroquoian settlement-subsistence.

ASSESSMENT OF THE QEW-REDHILL CREEK EXPRESSWAY

During the 1989 field season, an archaeological survey was completed of the proposed Queen Elizabeth Way–Redhill Creek Expressway interchange in Hamilton. Despite extensive modification of original ground surface in the project area, five prehistoric sites were discovered by shovel test pitting. In 1990, test excavations were undertaken at Mint Julep (AhGw-77) and Recliner (AhGw-80). The Mint Julep site is a Late Woodland fishing camp, situated on the Burlington Beach. A flexed human burial was partially exposed and then reburied. The Recliner site is a stratified Princess Point–Middle Woodland fishing camp, containing buried features and a rich artifact assemblage. The site is located in a small woodlot on the bank of a relict stream, less than one kilometre from Lake Ontario.

EXCAVATION OF THE HH SITE

The HH site (AhGw-81), a Middle Woodland camp located on the south bank of the same relict stream as Recliner, was subjected to full-scale mitigative excavation in the summer of 1990. Jeff Bursey served as field director.

Prior to hand excavation, a layer of clay fill that covered most of the site was removed by mechanical shovel. A compressed ploughzone lay under the clay and contained over 90 per cent of the artifact assemblage. Approximately 900 square metres of ploughzone were shovelled through 1/4-inch mesh screen and all artifacts, including fire-cracked rock, were retained. The interface between the ploughzone and the subsoil was trowelled, and features and individual artifacts were mapped and excavated. In addition, over 30 square metres of subsoil in the centre of the site were excavated to examine the soil profile and test for buried features and hidden stratigraphy.

Preliminary results suggest that the HH site was a seasonally occupied fishing station of the Point Peninsula, Middle Woodland period. The community pattern consists of a lithic activity area, two outdoor hearths, numerous features, several large storage pits, and a line of post moulds 4 to 5 metres apart, possibly part of a brush fence surrounding the central hearth/feature area (figure 2). Subsoil profiles and buried and stratified features indicate that the site may have been inundated occasionally by spring flooding of the adjacent creek. Site location and the lack of evidence for any substantial dwellings suggest a warm weather occupation.

The artifact assemblage from this site contains abundant lithics, including a few fragments of Flint Ridge chert from Ohio, many points and bifaces (often broken), more than one hundred netsinkers, and a considerable quantity of ceramics. Ceramics are generally decorated by dentate stamping with lesser quantities of dentate rocker stamping, "combing," and pseudo-scallop shell impressions. Unfortunately, bone preservation is poor and none of the

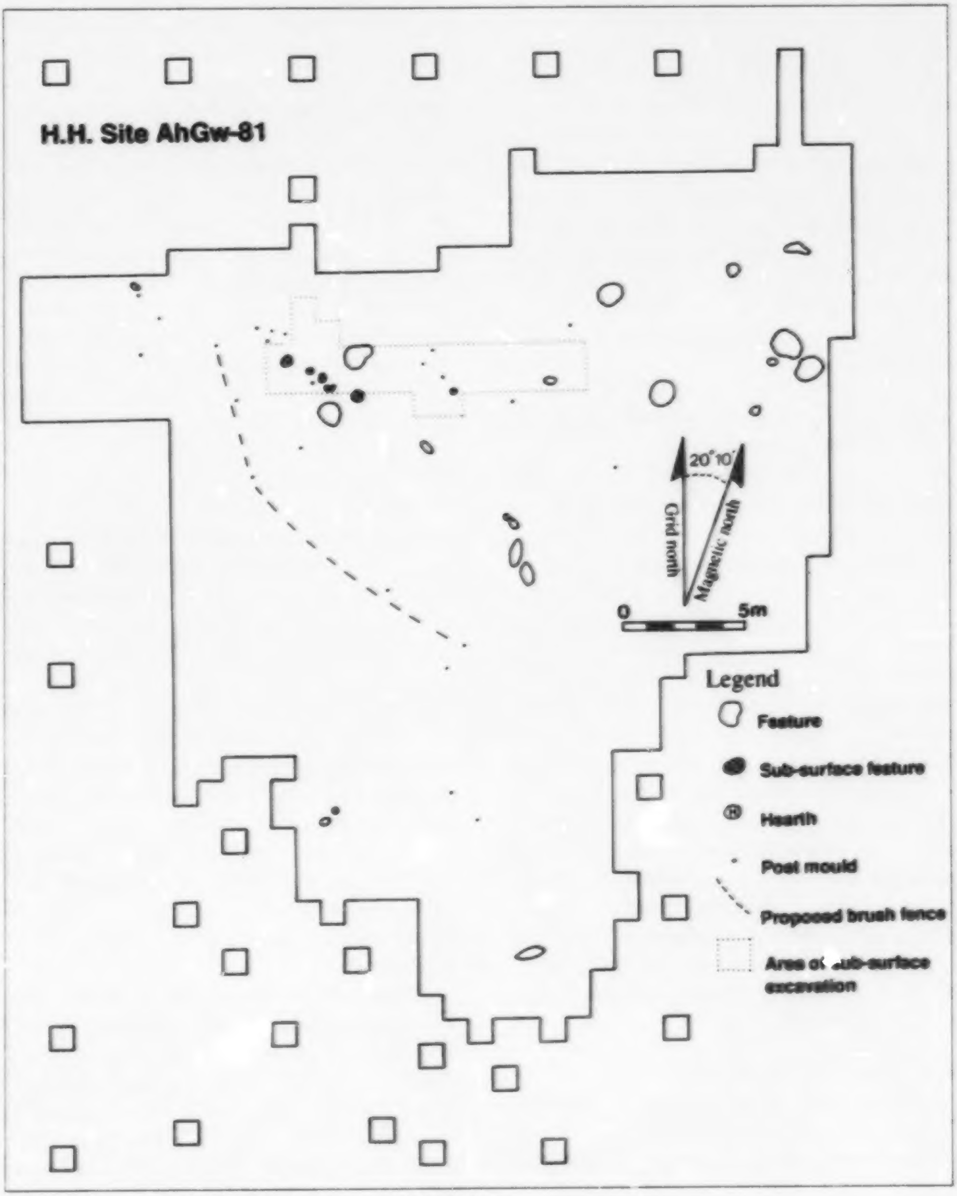
H.H. Site AhGw-81
20°10'
Grid north
Magnetic north
0
5m
Legend
Feature
Sub-surface feature
Hearth
Post mould
Proposed brush fence
Area of sub-surface excavation

Figure 2: Excavation plan and village pattern of the HH site

anticipated fish bone was recovered. The only zooarchaeological remains obtained were small scraps of calcined bone, and some deer bone that occurred beneath a large rock slab in a deep pit, surrounded by fire-cracked rock (perhaps the remains of a forgotten baked dinner). It is anticipated that the analysis of the HH site artifacts and community pattern will make a significant contribution to our understanding of Middle Woodland ways of life in the Hamilton region.

FIELD SCHOOLS

FIELD SCHOOL ACTIVITIES OF THE TORONTO BOARD OF EDUCATION ARCHAEOLOGICAL RESOURCE CENTRE

Ellen Blaubergs

The Toronto Board of Education's Archaeological Resource Centre (ARC) conducted its ninth six-week archaeological field school at the Trinity-Bellwoods Public Archaeology Project between 3 July and 10 August 1990. The site is located in the northeast portion of Trinity-Bellwoods Park in Toronto's west end.

The excavation at Trinity-Bellwoods Park is a three-year joint initiative between the Archaeological Resource Centre and the City of Toronto Department of Parks and Recreation. The excavation focuses on the remains of Gore Vale, one of the first brick houses constructed west of Yonge Street (for additional information see Hamalainen, "Educational and Public Archaeology at the Trinity-Bellwoods Site" in this volume).

The grades 11 and 12 field schools in the park were supervised by Ellen Blaubergs. Archaeological Resource Centre staff Rod Crocker, Greg Purmal, Carole Stimmell, Michele Tremblay, and Alison Scott (temporary staff member) acted as field school instructors. Following the policy of the Archaeological Resource Centre with respect to public programming, a one-to-six ratio of supervisor to student was strictly maintained at all times. Thirty-six students participated in the 1990 field schools. Student excavations concentrated on the front yard area of Gore Vale and the exposure of former roadways associated with the house. Features and deposits attributed to the postwar housing that occupied the area for more than ten years, including house footings, sidewalks, and garbage pits, also came to light.

The remarkable educational impact of the ARC field schools may be attributed to the fact that students actually participate in the research and excavation of a site. Unlike most high school courses, the ARC's field school takes place in a research context. Students are given an opportunity to learn about their city's history and prehistory in the classroom. In addition, they contribute to the database on their urban heritage through their excavations, artifact analysis, and archival research.

On-site instruction at the field school includes proper excavation methods, mapping, surveying, photography, and cartography. Off-site instruction includes

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Archaeological Resource Centre, Danforth Collegiate and Technical Institute, 840 Greenwood Avenue, Toronto, Ontario, M4J 4B7
Field School Licence 90-072

Figure 1: 1990 field school students at the Trinity-Bellwoods Public Archaeology Project

artifact processing, identification and interpretation, faunal analysis, and classroom work by Rob Mewhinney, history head at Eastdale Collegiate Institute in Toronto.

Field trips to relevant heritage, archival, and scientific research locations in the city are offered at intervals throughout the course. ARC archaeologists also teach in their area(s) of specialty in both the classroom and the field.

In addition to weekly tests and field-trip reports, students are evaluated on short assignments given by the supervisory archaeological staff and developed in consultation with Rob Mewhinney. Surveying, artifact analysis/interpretation, photography, and cartography skills are all assessed in a similar manner.

The final evaluation for the grade 11 students takes the form of a two-hour exam. Students also produce a "mini-site report" for their final practicum grade. This report is a summary of all knowledge gleaned from excavation of the student's unit during the six-week period. Relating their unit to the others on the site in the interpretations and conclusions section is an important aspect of this report.

The grade 12 final evaluation is similar to the grade 11 exam and site report. Because of a greater emphasis on archival research in the grade 12 field school curriculum, the grade 12 student

CLASSIC COWBOYS

Figure 2: Students Natasha Glickman and Bridget Donovan examine old photographs with Mrs G.D. Williamson, a local resident.

must also prepare an original report on historic research on a topic selected from a list developed by the history teacher and staff of the ARC. These student reports add to the database on Toronto's history. Insurance maps, tax assessment rolls, land registry office data, city and business directories, census records, and the like are all consulted by the students. Several reports submitted by students in 1990 are excellent. Data from these reports will be incorporated into the ARC's annual site report, curricula, research articles, and the ARC Material History Database.

All field school students are made acutely aware of their responsibilities as excavators of a real site. This awareness increased the educational impact of each topic introduced, whether methodological or historical. It also gave added assurance of quality work on the site and in the lab, an important consideration when the educational program has a research function itself.

EDUCATIONAL AND PUBLIC ARCHAEOLOGY AT THE TRINITY-BELLWOODS SITE

Peter Hamalainen

In 1990 the Toronto Board of Education's Archaeological Resource Centre (ARC) began the Trinity-Bellwoods Public Archaeology Project. This project is a joint initiative by the Archaeological Resource Centre and the City of Toronto Department of Parks and Recreation. Generous additional funding was provided by the City of Toronto to permit the opening of the site to the public every Saturday throughout the summer months. Scheduled to last three years, the project was organized to support six months of excavation in each year of operation, from 1990 to 1992.

The excavation will take place within the confines of Trinity-Bellwoods Park. The park is located in the west end of Toronto, east of Ossington Avenue, and stretches from Queen Street West to Dundas Street West. The area chosen for excavation is in the northeastern quadrant of the park, directly west of Gore Vale Avenue.

The archaeology project is to examine the remains of Gore Vale, the earliest brick building constructed in west Toronto. An imposing three-storey structure, Gore Vale was built in 1820 by the Hon. Duncan Cameron, secretary of the Legislative Assembly of Upper Canada. In 1870 the building passed to the Bickford family. By this time, structures on the property included the main house, a stable, and a conservatory. In 1904 the Bickfords sold the property to Trinity College. The principal building was renamed "Trinity House" and served as a residence for first-year students. Somewhat later, Gore Vale was used as a community centre. In 1926 the City of Toronto purchased the property and the house was torn down to allow for expansion of the park.

Gore Vale was not the only residence in the area that later became a park. Immediately after the Second World War, prefabricated housing was constructed where Gore Vale had once stood, to accommodate returning soldiers and their families. The houses were occupied until 1957, when they were removed intact and sold as cottages, so the area could be restored as parkland.

The area surrounding the archaeological excavation is replete with history. A large depression in the middle of the park marks the former course of Garrison

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Creek, so named because it drains into Toronto harbour at Fort York. Most of the original creek bed has been filled in over the years. Other known historic sites in the area include a late eighteenth-century military blockhouse, located at the southern end of the park area, which guarded the western approach to the Town of York (as Toronto was known at the time), and a brewery established in 1819, which was located south of Queen Street opposite the park.

The 1990 field season began on 22 May and lasted until 2 November. In the spring and fall, the site accommodated half-day group programs for Toronto Board of Education students who took part in the excavation of the site. For six weeks after 3 July, the ARC conducted its annual archaeological field schools, where grades 11 and 12 students learned archaeological skills ranging from excavation and surveying to artifact analysis and report preparation. Special interest groups also took part in the excavation during the summer holidays. In keeping with the ARC's open-site policy, volunteers and visitors were accommodated throughout the field season.

The limits of the proposed excavation area include the eastern end of Gore Vale as well as a sizeable portion of the front yard. Since 1990 was the initial year of excavation in the park, the field strategy was exploratory in its nature. Specifically, the objectives of the exploratory work were to determine the exact location of Gore Vale on the property; determine the extent of demolition when Gore Vale was torn down in 1926; locate features outside the building that relate to the occupation of Gore Vale; identify layers and features that relate to activities in the site area dating after the destruction of Gore Vale; and determine the amount of disturbance and fill deposited on the site.

The exact location of Gore Vale soon became evident; sections of both the south and north basement walls were uncovered in the northern portion of the excavation area. The walls were constructed of rough-cut limestone joined with mortar, and measured from 45 to 50 centimetres in thickness. A bricked-up door or window was discovered along the southern wall, indicating that the building had been renovated at some time.

The remains of a brick "chimney" were found within the basement fill. Constructed of red brick, the structure measures 90 centimetres north-south and 72 centimetres east-west. The purpose of the "chimney" is still in doubt. It may have been part of a fireplace or served as an air vent for a drainage system.

The demolition of the house followed a pattern familiar to urban archaeology in Toronto: the brick walls and rubble were pushed in to fill the basement cavity and the rubble covered by clay capping. The demolition deposit found in the basement of Gore Vale consisted of a section of partially intact wall jumbled in a mixture of loose bricks, cut limestone, mortar and plaster. Although the bottom of the demolition deposit has not yet been reached, its thickness has been determined to be more than 1 metre.

A fallen section of the east wall of the house was found more or less intact. This wall was constructed of red brick but also contained several rows of yellow brick. The presence of both types of brick suggests that the walls of Gore vale were constructed of red brick with a decorative framing of yellow brick (figure 1), a typical Toronto architectural motif during the nineteenth century.

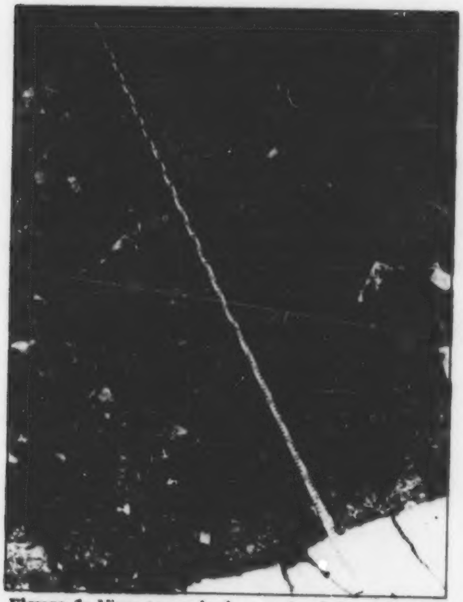

Figure 1: View towards the south of the collapsed east wall of Gore Vale in the basement rubble. The wall marks the depth of the 1990 excavation and will be removed in 1991 when excavation will continue to the bottom of the basement.

Sandwiched between the brick rubble and clay capping were lenses of roofing material. These consisted of slate, tarpaper, and ferrous metal shingles. Often these three roofing materials were found one on top of the other, indicating that the house had been roofed originally with slate, then with tarpaper, and finally with metal shingles.

At the present time, roadways are the only features discovered outside the house that relate to Gore Vale. These roads were surfaced with tightly packed ferrous clinkers that, during excavation, could only be removed by using a sledge hammer. Although the exact nature of the roadways still needs to be determined, they are believed to represent a circular driveway located in front of and immediately south of Gore Vale.

Since 1926, when Gore Vale was demolished, the site area has served as a public park and as the location of prefabricated housing. Features relating to both periods of use were found in the loamy upper layers of the deposits. Remains of park use include buried tree stumps and a water-pipe line trench that is still active. Evidence of the postwar housing is scanty, since the houses themselves were removed intact. The only architectural evidence for the houses recovered so far consists of concrete remnants of sidewalks leading from the houses to Gore Vale Avenue.

The fill layers encountered during excavation relate to the capping following the demolition of Gore Vale and to the filling of Garrison Creek. Evidence of the capping came from the area of the brick building, where the clay fill layer was found to be from 45 to 50 centimetres in thickness. Towards the southern end of the site — the area closest to Garrison Creek — the clay fill deposit was found to be up to 85 centimetres thick (figure 2). The clay fill layer is uniform yellowish-brown in colour. Whether the deposits above the house and at the southern end of the site were deposited simultaneously remains to be determined.

The 1990 excavations produced over ten thousand artifacts. At the time of writing, little can be said about the artifacts since they are in the process of being analysed. However, the assemblage contains numerous objects that provide insight into the daily activities on the site. For example, two interesting artifacts were found in layers associated with the occupation of Gore Vale. One was a medicine bottle fragment embossed "Celery Compound," which contained nerve tonic. The name is somewhat misleading, for the soothing effect in the

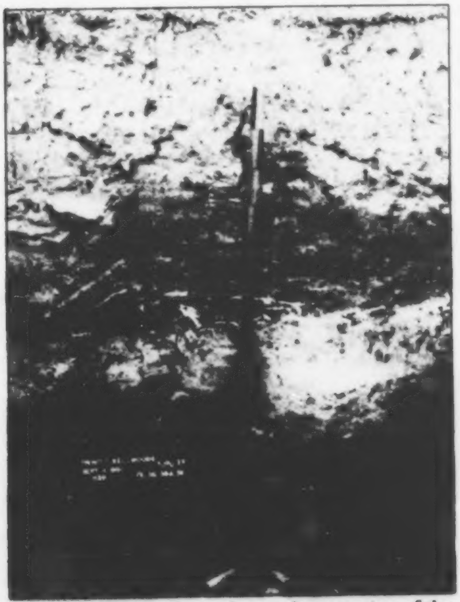

Figure 2: Stratigraphy in the southern portion of the Trinity-Bellwoods site. The trowel and menu board rest on top of a clinker-surfaced former roadway above which is twentieth-century fill. The scale leaning against the wall is 1 metre in length.

tonic was not provided by celery but by coca leaves. Another object is a lead typeset with letters spelling "Miss Gould." This appears to be a personal item and might have been used to mark possessions such as books. Future historical research may connect Miss Gould with the history of Gore Vale. Other artifacts will help to date the renovations to Gore Vale. An example is a mortar-covered Canadian penny, minted in 1918, which was found beside the bricked-up doorway or window mentioned earlier. This documents the common practice of bricklayers to stick a coin in the mortar to date their handiwork. Several artifacts throw light on the occupation of the area by returning soldiers from the Second World War. An outstanding object related to this period is a home-made bracelet, composed of Italian and Albanian coins, all of which had been minted between 1940 and 1942. The coins, or perhaps the bracelet itself, were probably a souvenir brought home by a Canadian soldier who had served in the Italian campaign. Other artifacts recovered range from nineteenth-century clay pipe fragments to modern plastic toys. These, as well as the artifacts mentioned above, promise to give a detailed picture of the development of the area from its early pioneer days to the present urban environment.

THE AUGER SITE: EIGHTH SEASON

Marti Latta

The University of Toronto continued its archaeology field-training program during May and June 1990 at the Auger Site (BdGw-3) in Medonte Township, Simcoe County. Twenty-two students and six staff were present for six weeks, carrying out excavations, surveying and mapping, and artifact preparation and recording.

The Auger site is a historic (c.AD 1620) palisaded village that was occupied by the Attigneenongnahac Nation of the Huron Confederacy (figure 1). The 1990 season confirmed the northern and western borders of the site, which covers an area of approximately 2.5 hectares. The three-row palisade that surrounds the village was rebuilt at some point, expanding the village to the south.

To date, fourteen longhouses have been partially or completely excavated; the remaining unexcavated site area could hold fifteen to twenty-five additional longhouses, depending on their size and spacing. The houses are, with one exception, similar in orientation and dimensions, measuring 7 to 7.5 metres in width and 20 to 25 metres in length. They are arranged in four fairly regular rows, with 1 or 2 metres separating their walls and a 3 to 5 metre gap between their ends, which provides streets through the village. Typically, a house has three or four well-defined hearths. An estimated population of 750 to 1000 persons lived at the Auger site.

The subsistence of the Auger people has been studied in detail. In addition to large amounts of charred corn and beans, the site has produced seeds and other fragments of a wide variety of wild berries and fruits (Monckton 1990). Faunal remains indicate broad-based foraging of large and small fish and mammalian species. The domestic dog was probably eaten as well. There are few avian remains; birds were apparently an uncommon item in the Auger diet.

A noteworthy find in 1990 was a large pit (1.9 metres in diameter by 0.9 metres deep below ploughzone) that contained complex-stratified deposits of organic soils, ash, and domestic rubbish. The presence of articulated human foot bones in the lowest, inorganic deposit suggests that this was a temporary burial pit from which the occupant was removed for final burial at a Feast of the Dead. Based on

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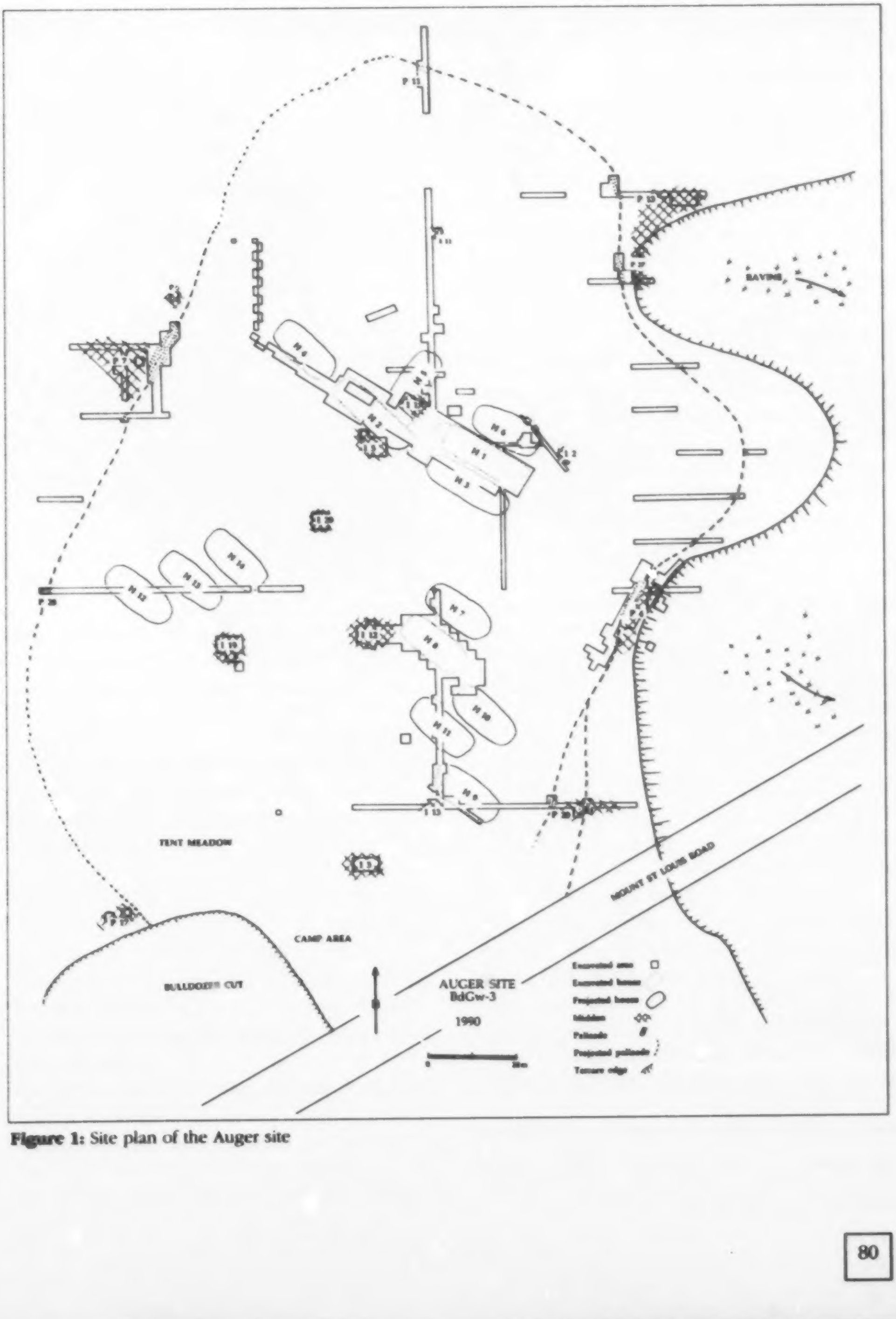
100 Northwood Drive, Willowdale, Ontario, M2M 2K1

Field School Licence 90-070


P 11
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RAVINE
H 1
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H 10
H 11
H 12
H 13
H 14
P 26
TENT MEADOW
CAMP AREA
BULLDOZED CUT
MOUNT ST LOUIS ROAD
AUGER SITE
BdGw-3
1990
0
20m
Excavated area
Excavated house
Projected house
Midden
Palisade
Projected palisade
Terrace edge

Figure 1: Site plan of the Auger site

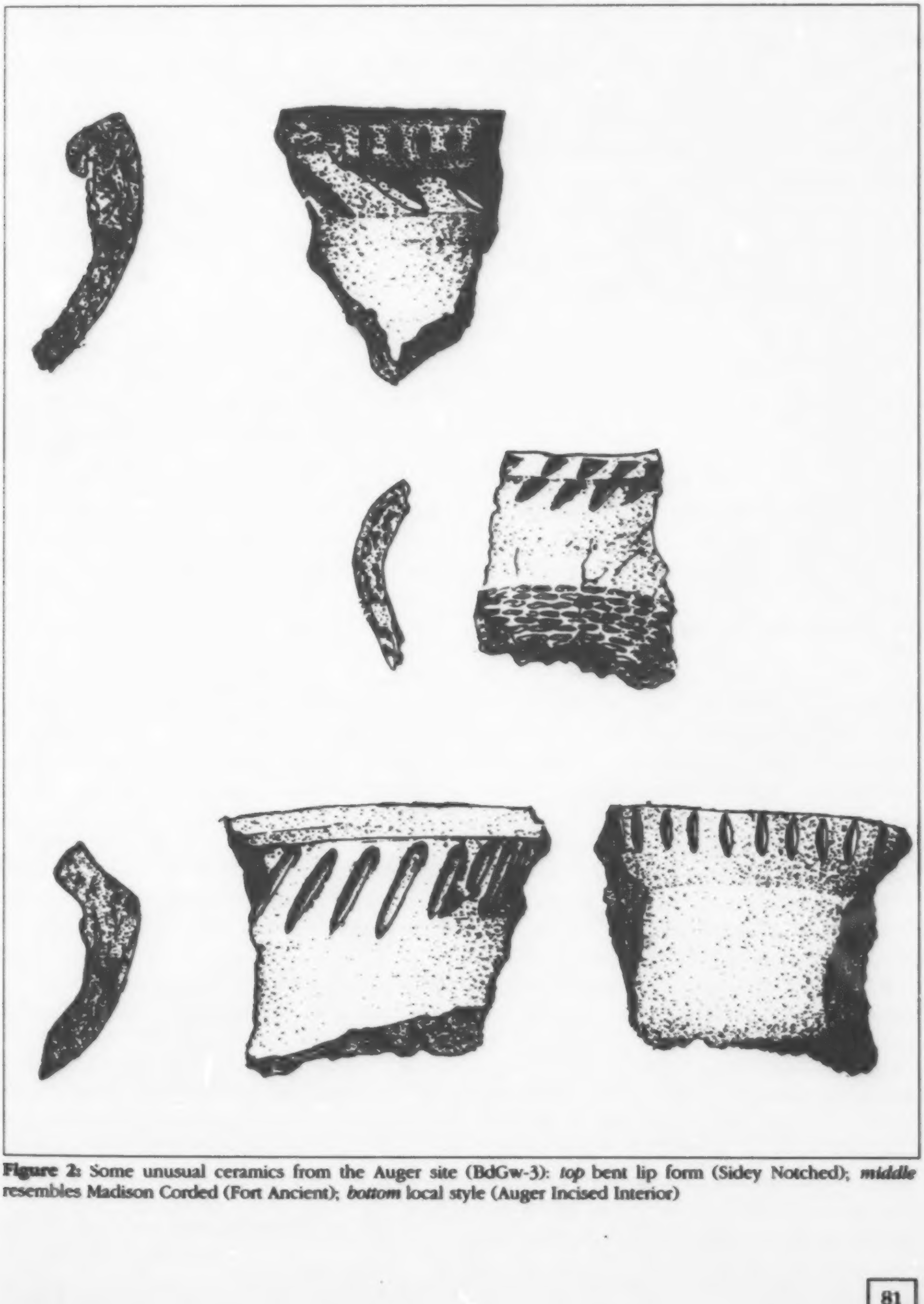

Figure 2: Some unusual ceramics from the Auger site (BdGw-3): *top* bent lip form (Sidey Notched); *middle* resembles Madison Corded (Fort Ancient); *bottom* local style (Auger Incised Interior)

the absence of burials in the rest of the village, we suggest that this event took place near the end of the Auger occupation. Some or all of the large pits, which are common features in all longhouses at the site, probably represent other removed burials.

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THE BRUCE COUNTY BOARD OF EDUCATION: EXCAVATIONS AT THE MASON FAMILY CABIN SITE

Elise Marla Sherman

Between 30 May and 6 June 1990, a successful small-scale field school was operated on the Mason Family Cabin site (BeHh-8). The excavation was sponsored by the Bruce County Board of Education, with additional funding by The Ontario Heritage Foundation to support faunal and artifact analysis as well as report preparation. The field school was directed by Elise Marla Sherman. Supervisory staff included Rita Kingston, Kristi Long, Michelle Murray, Bobbisue Trelford, and Alison Evans. Thirty-one grade 7 and 8 students in the TRAIL program (To Realize Advanced and Independent Learning) excavated a total of twelve 1.5 by 1.5 metre and four 1.0 by 1.5 metre units (figure 1) during the day and were instructed in artifact cataloguing, dating, and analysis at night.

The Mason Family Cabin site is located on the southeast corner of Lot 19, Concession 23 in Amabel Township, Bruce County. This property, along with Lots 17–20 (Concession 22) and Lot 20 (Concession 23), was granted in 1868 to William Roy, a St Catharines land speculator (deed: Crown and William Roy 1868). Roy died prior to visiting the properties (Clarke Birchard, personal communication). In 1874 the lands were purchased by William James Mason and his wife Cicely Alderson (formerly of Yorkshire, England) (deed: William Roy and William James Mason 1874). The Masons then built a log cabin on Lot 19 (Concession 23). A root-cellar basement, stone foundation and brick chimney, frame kitchen, and woodshed were later added to the initial log cabin structure (William J. Mason, personal communication), probably in the late 1870s (figure 2). Several generations of Masons occupied the cabin structure and farmed the properties. In 1916 the second generation of Masons to occupy the cabin moved to a stone house, constructed between 1900 and 1907 on the northeast corner of Lot 19, Concession 22. The cabin was then probably used as a storage shed. For a brief time between 1921 and c.1931 or 1932, the cabin was occupied by Harry Fogden and his wife Anne Vicary of England. The Fogdens were sponsored by William James Mason's nephew, William Preston (McGregor 1984, 245). By c.1931 the Fogdens had moved from the log cabin, which was probably

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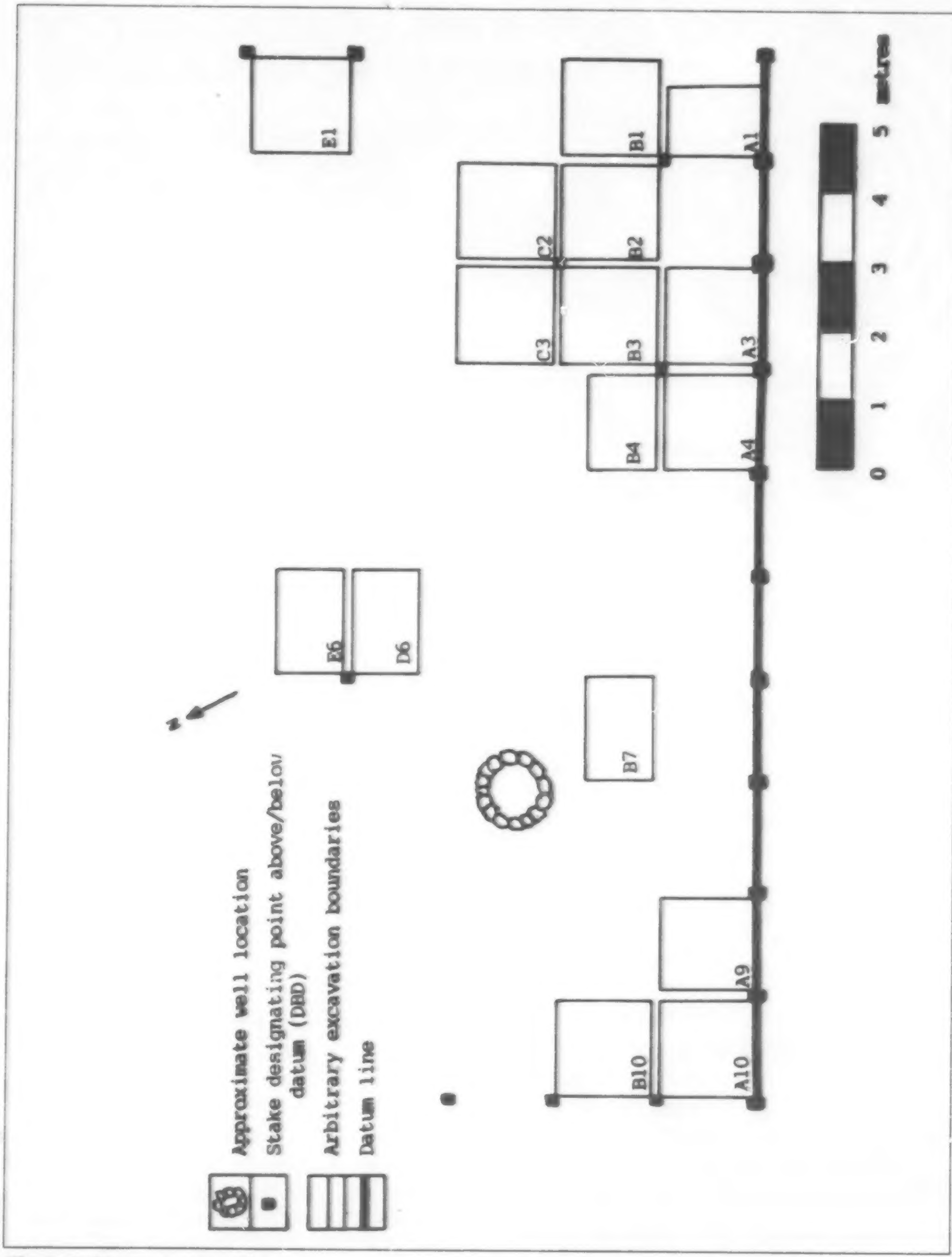
55 Brickstone Circle, Thornhill, Ontario, L4J 6M4
Field School Licence 90-049


Approximate well location
Stake designating point above/below datum (DBD)
Arbitrary excavation boundaries
Datum line
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E1
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A1
C2
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C3
B3
A3
B4
A4
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D6
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metres

Figure 1: Site excavation grid

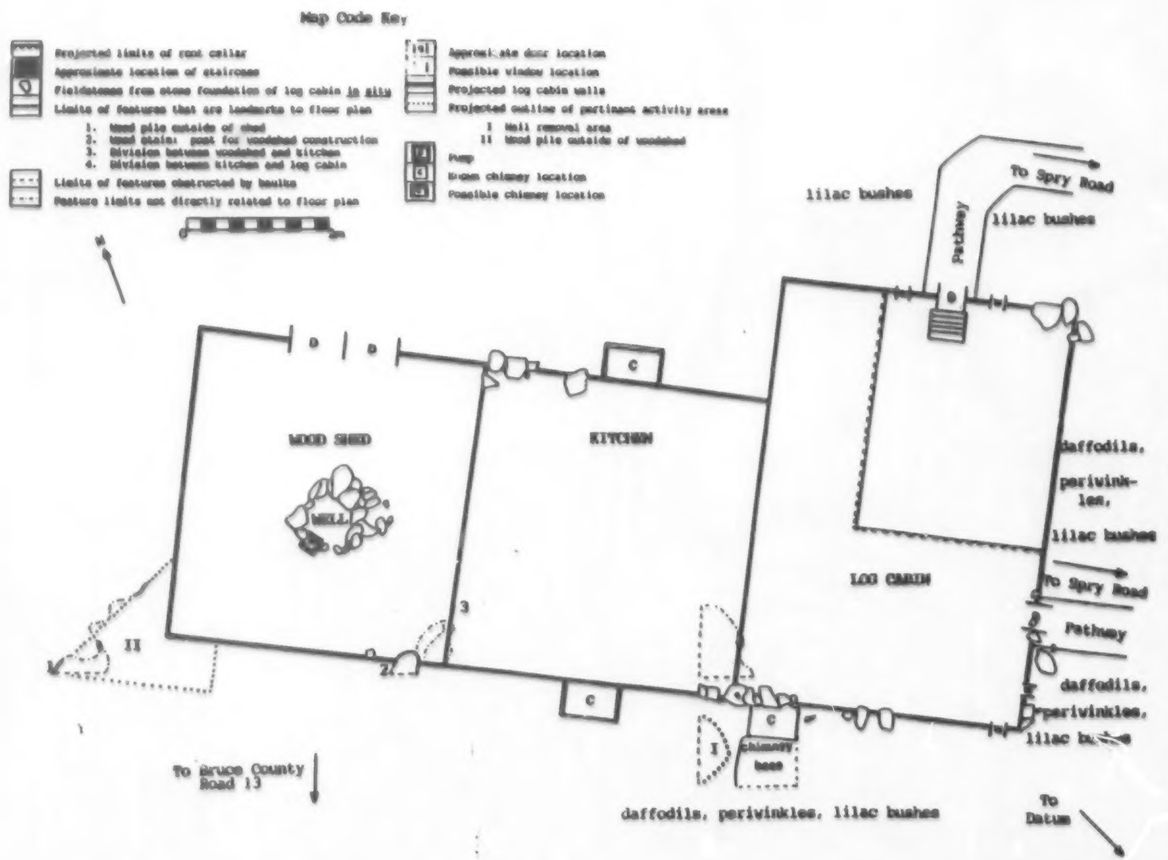
Map Code Key
Projected limits of root cellar
Approximate location of staircase
Fieldstones from stone foundation of log cabin in situ
Limits of features that are landmarks to floor plan
1. Wood pile outside of shed
2. Wood stain: post for woodshed construction
3. Division between woodshed and kitchen
4. Division between kitchen and log cabin
Limits of features obstructed by baulks
Feature limits not directly related to floor plan
Approximate door location
Possible window location
Projected log cabin walls
Projected outline of pertinent activity areas
I Wall removal area
II Wood pile outside of woodshed
Pump
Known chimney location
Possible chimney location
0
2m
N
WOOD SHED
WELL
KITCHEN
LOG CABIN
D
D
C
C
C
chimney base
I
II
2
3
lilac bushes
Pathway
To Spry Road
lilac bushes
daffodils,
periwinkles,
lilac bushes
To Spry Road
Pathway
daffodils,
periwinkles,
lilac bushes
To Datum
daffodils, periwinkles, lilac bushes
To Bruce County Road 13

Figure 2: Plan of Mason family cabin

once more used as a storage facility. It shortly fell into disrepair and was torn down. In 1971 the properties were purchased by the Bruce County Board of Education to be used as an outdoor education facility (deed: William J. Mason and Bruce County Board of Education 1971).

In 1990, there is little surviving evidence of the former cabin, probably because of the method of demolition. When the cabin was dismantled, most of the wood was sold or reused. The poorer quality wood was thrown into the cellar, along with broken bottles and ceramics, and other assorted garbage. The site was probably then levelled with fill and bulldozed (William J. Mason, personal communication). As a result, only one small portion of the stone foundation remains *in situ* while the rest of the site is littered with fieldstones. Other Mason occupation features include a large rock, identified by William James Mason's grandson, William J. Mason, as a stone base for one of the cabin's two brick chimneys (brick from both chimneys also litter the site); a builder's trench common to the foundation and chimney base, indicating both were constructed at the same time; a large post mould, probably a support for a woodshed wall adjacent to the cabin; a large organic stain to the west of the approximate location of the woodshed's west wall, probably from the woodpile that was kept along that side of the shed (William J. Mason, personal communication); and the possible border between the cabin (indicated by loosely packed fill) and the kitchen (indicated by hard-packed sandy clay) structure (figure 2).

Features relating to cabin demolition include several dragmark stains created by fieldstones moved by the bulldozer during demolition activities. Artifacts uncovered support the 1874 to c.1931 date for the cabin, as does written documentation.

The 1990 field season at the Mason Family Cabin site served as an exercise to introduce TRAIL students to the discipline of archaeology and to acquaint supervising archaeologists with the site. Future excavations should concentrate on the cellar, front door, and woodshed and kitchen perimeter areas. To accomplish this goal, one or two additional field schools could be carried out at the Mason Family Cabin site.

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SITE/PROJECT SPECIFIC ACTIVITIES

ARCHAEOLOGY IN THE HALIBURTON HIGHLANDS

Thomas Ballantine

During 1990, Tom Ballantine of the Haliburton Highlands Museum continued his research and survey work of the past several years. This work focused on examining the many access points to the lakes and rivers of the highlands. A number of visits were also made with cottagers, residents, and visitors to the area, in response to queries about archaeological finds they had made. Several collections were also examined.

In the past year, six sites were registered with the Ministry of Culture and Communications, bringing the number of recorded sites in the county to about sixty. There are many known sites in the area that have not as yet been examined and recorded. Taken as a whole, these sites represent only a small fraction of those that will eventually be discovered.

Most of the sites in the Haliburton Highlands are small in extent and a great number have been destroyed. Erosion, due to the artificially high water levels first created by the logging companies and maintained since for flood control and recreational purposes, has been the primary agent in site destruction. Shoreline development has also been a contributing factor to the destruction of sites. These factors, however, have also led to the discovery of the majority of sites in the area. Many reports are made by people who have found artifacts while walking along beaches, wading in the shallows, or during the course of construction and landscaping.

Most of the sites are small. Although they have been referred to as "arrowhead resharpening stations," these scatters, when they are considered in greater detail, are indicative of diversified pursuits and contribute to an understanding of the type and extent of exploitation in the area during a lengthy prehistory.

Haliburton County is the headwaters of, or is traversed by, the Gull, Madawaska, Drag-Irondale-Burnt, Oxtongue-Muskoka, Black, York, and Crowe river drainage systems. Although some small sites represent a single component and yield a relatively predictable assemblage of a few flakes, scrapers, and a broken point, other larger multicomponent sites yield a range of material that is amazing. The latter type of site might include artifacts of native copper, quartz, six or seven varieties of chert, chalcedony,

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jasper, greywacke, ground stone tools of schist and slate, artifacts cut from copper or brass pots, as well as both Iroquoian and Algonkian ceramics. Most often these larger sites contain historic artifacts related to the logging era or to modern hunting and fishing parties. Unfortunately, because of the extensive disturbance that these sites have undergone, it is difficult, if not impossible in many cases, to separate individual components.

Thus far I have been able to discern only the most obvious differences in the age of sites. The most recent acquisitions of the Haliburton Highlands Museum include points dating to the Archaic period. Other material of the Late Woodland period seems to include a large number of small chert end scrapers.

There are apparently several minor differences in the distribution of raw material types from one watershed to another. Although insufficient data are available for a statistical study, it appears that more quartz was used on the northern sites, especially those on the Madawaska system. The sites on the Gull River and Burnt River systems contain more chert from relatively accessible sources in nearby Victoria County. This seems to hold true for sites that were occupied later in the prehistoric record. Finally, there appears to be a greater diversity of raw material on the earlier sites.

Thus far I have been concerned primarily with conducting an inventory of sites in the highlands. I have conducted very little work in the eastern area of Haliburton County and, consequently, this area is somewhat underrepresented in my observations. I would like to thank Dave Croft of Pembroke, who grew up near Wilberforce, for providing me with a number of leads to follow up on in that area. When the eastern part of the county is better known, I hope to select a few sites for test excavation. In this way, I hope to obtain a better understanding of their research potential than can be gathered from surface scatters and collections.

EXCAVATIONS AT BARNUM HOUSE, GRAFTON, ONTARIO

Dena Doroszenko

Dena Doroszenko, senior archaeologist with the Property Conservation Unit of The Ontario Heritage Foundation (OHF), conducted a five-week excavation program at Barnum House, located on the north side of Highway 2, approximately 1.5 kilometres west of the Town of Grafton. The project was funded by the OHF.

Barnum House was built c.1820 by Eliakum Barnum and is considered to be one of the finest houses to survive from the early years of settlement in Ontario. In 1982 the OHF acquired the property and launched a restoration and interpretive research program for the house. Archaeological research was conducted in 1982 and 1986 by Gary Warrick and in 1987, 1989, and 1990 by Doroszenko.

During the 1982 excavations, Warrick and his crew recovered over 10,000 artifacts reflecting the two major periods of occupation of the property. Historical documentation revealed that prior to the building of Barnum's house on the site, a James Norris had built a house in c.1811. In 1814–15 a fire destroyed this structure. Archaeological excavations by Warrick in 1982 and 1986 uncovered unmistakable evidence for the destruction of the Norris house (Warrick 1983, 1986). Additional fieldwork took place at the various additions to Barnum house and several outbuildings, including the carriage house and a smokehouse.

During the restoration of the exterior of the house in 1989, archaeological monitoring was conducted by Doroszenko, who noted that evidence for the earlier Norris house was also present in the front yard of the house. As part of the excavation program for the 1990 field season, two 3 by 1 metre trenches were excavated in the front yard to further explore this area. In addition, excavations were also conducted at the rear of the house in the area where a wing was to be built in 1990 that would service the house museum. The new structure was to be placed on the site of the 1870 woodshed that once stood in this area. To identify the outline of the former woodshed, a large area 8 by 9 metres was opened for archaeological excavation.

In late November the OHF began the construction phase of the project. Monitoring of the former woodshed area consisted of watching the construction

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work for evidence of archaeological deposits, photographing the work, and retrieving artifacts. The archaeological excavations completed in early June 1990 had exposed the foundations of the 1870 woodshed that once stood to the rear of Barnum House. Associated features recorded during the monitoring phase included an earlier walkway that led to the west entrance to the kitchen, stratigraphic evidence of the Norris fire (c.1814), and further evidence of the west and south foundation walls of the woodshed.

Northwest of the 1870 woodshed at a distance of 3.60 metres, a partial foundation of an unidentified outbuilding was uncovered. Further north of this area, the carriage-house foundations were partially exposed during work by heavy machinery. All efforts were made to prevent further damage to this structure.

In addition to the work discussed above, a two-week public archaeology program was developed for grade 7 and 8 classes from schools in the surrounding communities. Approximately 300 students took part in this program, which consisted of a site tour, a slide lecture on archaeology, a maximum of one hour in the field under supervision learning how to excavate, and a workshop on historic artifacts.

By the end of the project, the 1870 woodshed was almost completely exposed (see figure 1). The west and north

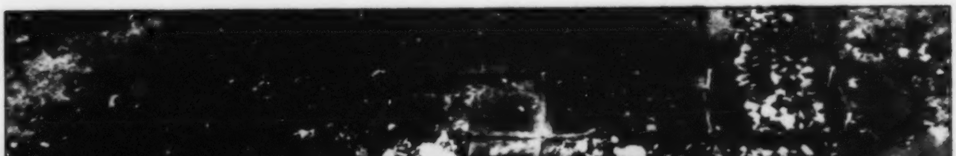

Figure 1: View of 1870 woodshed foundations behind Barnum House

walls are clearly visible; however, the east foundation wall extends northward for an unusual length and ends abruptly without turning east or west. It is possible that the wall Warrick uncovered in 1982 and interpreted as the north wall represents an interior partition. Equally plausible is the explanation that the east wall merely extends beyond the back of the shed to separate the area from the east lawn area. Within the structure, two refuse pits were excavated. The contents of each pit related to an earlier restoration of Barnum House in the 1940s by the Architectural Conservancy of Ontario. Wallpaper fragments lining the pits were comparable to existing wallpaper within the house and reflect a period of decorating after the 1954 fire in the house. Warrick (1986) noted evidence for the Norris fire in the woodshed area along the east foundation wall. Evidence of this fire was also documented by Doroszenko along the west wall of the shed. In addition, a large quantity of nineteenth- and twentieth-century artifacts was recovered from the structure.

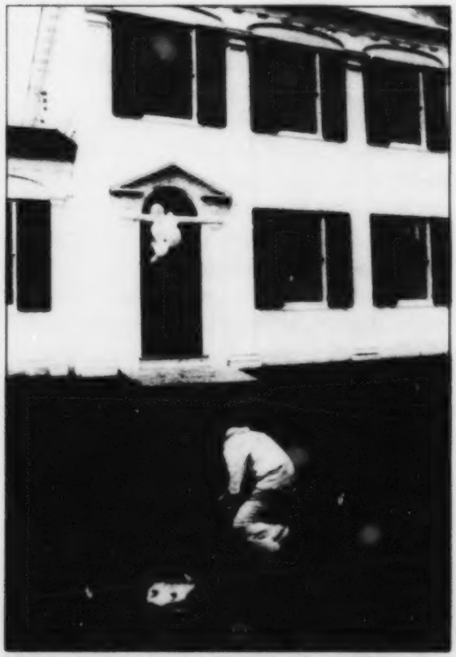

Figure 2: Suboperation 14A in front of Barnum House

Excavation of the two trenches in the front of the house (figure 2) revealed complex stratigraphy related to the fire of 1814–15 and the demolition of the Norris house. These layers of plaster rubble, charcoal, and fire-reddened soils could be seen to run the length of each unit. In suboperation 14A, there appeared to be a larger proportion of red-brick rubble than noted in 14B. Artifacts from both units consist of early nineteenth-century materials such as machine-cut nails, melted window-glass, and a small quantity of burnt ceramics.

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INVESTIGATIONS AT SMALL, INTERIOR, EARLY PALEOINDIAN SITES IN SOUTHWESTERN ONTARIO

Christopher Ellis, D. Brian Deller, and Lawrence Jackson

In 1990 the authors carried out archaeological excavations at three small, interior Early Paleoindian (fluted point) sites in southwestern Ontario. Previous Ontario research has been biased towards large Paleoindian sites and sites associated with the strandline of proglacial Lake Algonquin in the modern Lake Huron basin area. The project was designed to help overcome these biases and the limited view it places on our knowledge of Paleoindian settlement systems and our understanding of Paleoindian lithic tool kits, mobility, and the like. Moreover, small sites per se are more likely to represent single, short-term occupations. Thus, they have greater potential for containing intact spatial patterning useful for delineating "tool kits" and the spatial organization of activities (for example, Shiner 1970; Finlayson 1977, 226–7).

From an Early Paleoindian data base of almost thirty known interior sites, six sites were singled out as possessing attributes germane to solving particular problems about the Paleoindian occupation of the area. We were able to carry out excavations at three of these sites: Culloden Acres (AfHj-90), Bolton (AfHj-89), and Murphy (AeHk-1) (figure 1). In addition, Dr Paul Karrow and Dr Barry Warner of the Department of Earth Sciences, University of Waterloo, carried out studies to aid in placing the sites in a geological and paleo-environmental context. This research included the coring of two bogs in the London-Strathroy vicinity and the tracing and interpretation of Late Pleistocene geological features, such as strandlines, in the vicinity of the sites.

Culloden Acres and Bolton are in close juxtaposition and represent two of a cluster of five or more sites situated around a large wetland/swampland.

THE CULLODEN SITE

The Culloden site yielded evidence of at least five areas of Paleoindian activity and at least two other possible areas on an adjacent farm. All areas were identified as Paleoindian sites/findspots because of the presence of Collingwood (Fossil Hill Formation) chert (Storck and von Bitter

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Site/Project Specific Licence 90-057, 90-086

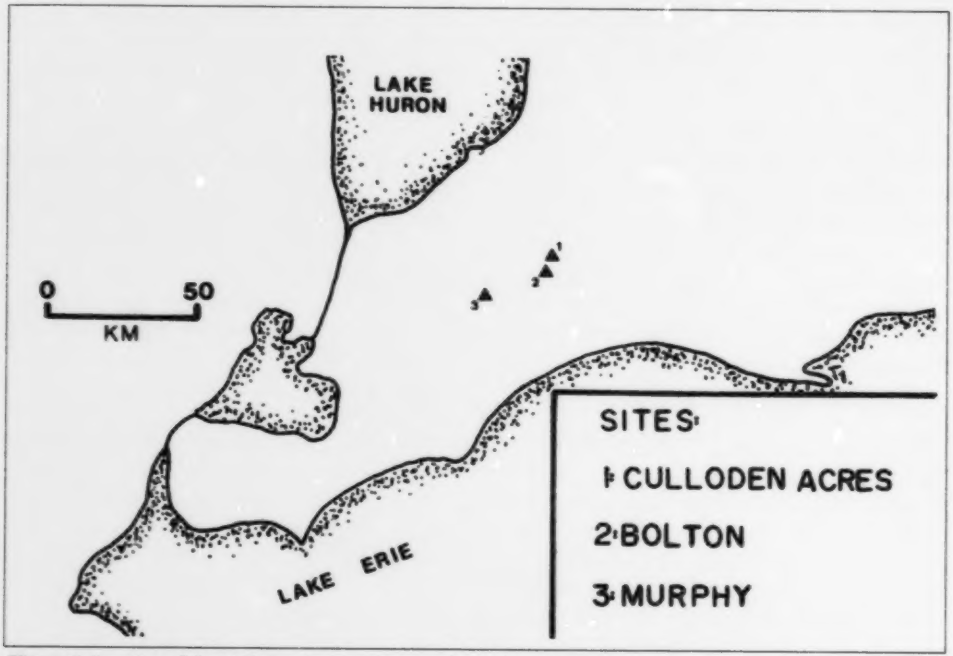

Figure 1: Location of the Culloden Acres, Bolton, and Murphy Paleoindian sites

1989) from outcrops located some 175–200 kilometres to the northeast — a material that is solely diagnostic of Early Paleoindian occupations west of London, Ontario (but not, we might add, of areas farther east). Two areas (A and B) were extensively excavated, and a third (area C) was investigated by limited test-pitting (figure 2). Area A is interpreted to have been a highly specialized activity area. The assemblage of some sixty tools/fragments is dominated by trianguloid end scrapers (c.65 per cent of the assemblage of tools assignable to type), often with hafting notches. The remaining tools consist almost entirely of gravers and retouched/denticulated flakes. In line with the tool assemblage, flaking debris consists almost solely of uniface resharpening flakes. The material from area A, both tools and waste, clustered into four relatively discrete concentrations, all of which, based on the tool forms recovered, witnessed identical activities. Suggestions of at least two Paleoindian feature remnants were encountered. One of these consisted of a c.1-metre-diameter oval of dense subsoil debris that was not in any pit visible to the naked eye but included over one hundred waste flakes and several tool fragments that, when piece-plotted, formed an oval in plan and basin in two profiles. The second probable feature also lacked a visible outline and, because it contained less material, was more ephemeral. Nonetheless, from within a c.1.5 metre area were recovered two trianguloid end scrapers, a side scraper fragment, a "wedge" on sub-greywacke,

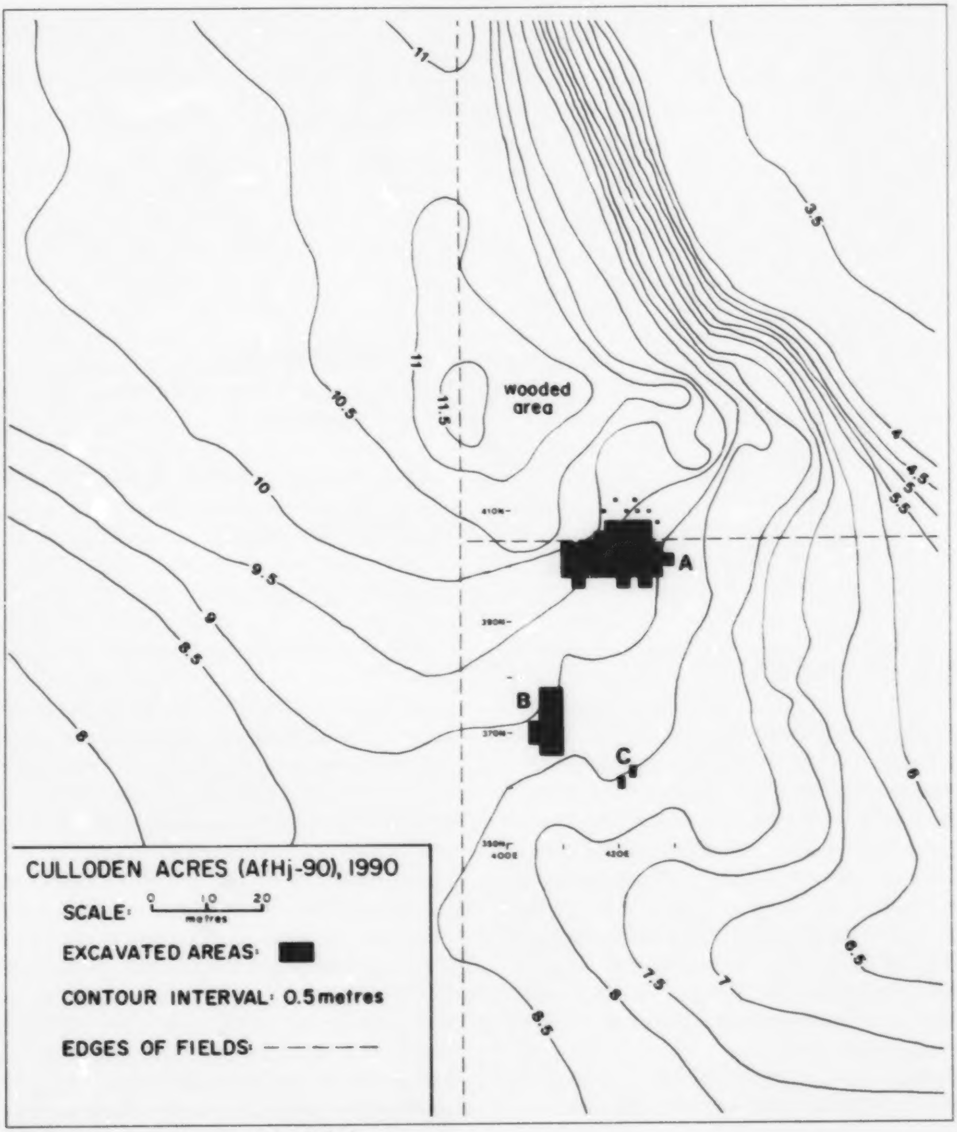
CULLODEN ACRES (AfHj-90), 1990
SCALE: 0 10 20 metres
EXCAVATED AREAS: ■
CONTOUR INTERVAL: 0.5 metres
EDGES OF FIELDS: - - - - -
wooded area
A
B
C
410N
390N
370N
350N
400E
420E
11
11.5
11
10.5
10
9.5
9
8.5
8
3.5
4
4.5
5
5.5
6
6.5
7
7.5
8
8.5

Figure 2: Topographic map of the Culloden Acres site

and a scattering of uniface retouch flakes.

Area B was also a specialized activity area. Aside from a single concave side scraper and another uniface fragment, the sole artifact recoveries consisted almost entirely of biface flaking debris, including several channel flake fragments from point fluting. The area B excavations also encountered evidence of a small Early Archaic occupation represented by diagnostic corner-notched, serrated Kirk-like points; small, oval end scrapers with completely parallel-flaked dorsal surfaces; a fragment of a hafted concave scraper diagnostic of this time period (Ellis et al. 1991); a point preform; and a graver. In short, the kinds of tools recovered were identical in type to those from the combined areas A and B Paleoindian occupation of the site and, assuming functional equivalence, suggest continuity through time in how the site area was exploited. Moreover, this Early Archaic material spatially clusters in two discrete locations in area B, and the differences in tools between the two areas (end scrapers/gravers in one; evidence of point manufacture and use of concave side scrapers in the other) mirrors the spatial dichotomy seen in the nature of the Paleoindian activities at the site between areas A and B. The area B excavations also uncovered a single Middle Woodland feature containing a notched biface on Flint Ridge, Ohio, chert.

THE BOLTON SITE

The Bolton site also appears to be a specialized activity site. Although a few simple flake tools were recovered, including two gravers, the assemblage is dominated by fluted bifaces (both finished broken points and preforms). These bifaces are of the distinctive Crowfield type and include at least one point with a single shoulder on one edge, a subtype seen at other sites with Crowfield points (Deller and Ellis 1984). Among the flaking debris recovered were a number of distinctive channel flakes from these often multiple fluted points. In contrast to Culloden, the Bolton site assemblage is dominated by Onondaga chert from outcrops located c.160 kilometres southeast of the site. In addition to the Paleoindian material, evidence was encountered documenting Early Archaic, Late Archaic, and Late Woodland occupation of the site.

MURPHY SITE

The Murphy site is located some 50 kilometres west of Culloden and Bolton. It occurs on an intractable clay that limited the area excavated. However, one area was excavated and yielded solely biface flaking debris, including channel flakes. Surface finds and text excavations at other locations on the site yielded pièces esquillées, denticulates, side scrapers, a trianguloid end scraper, and other uniface fragments and uniface debris. This spatial pattern in artifact distribution suggests that point manufacture was separated from other types of activities. Although a single Onondaga denticulate and one possible Upper Mercer chert biface fragment were recovered, the Murphy assemblage is dominated by Collingwood chert originating from geological sources 240 kilometres to the northeast. In fact, the Collingwood chert–dominated assemblage is one of the most distant known from the geological source of that material.

In addition to documenting specialized kinds of sites/activity areas that had heretofore been unknown for Ontario, the work discussed above has allowed us to recognize and document considerable patterning in the Paleoindian archaeological record, such as the consistent separation of areas of point manufacture from those of other activities and the fact that tools were often discarded where they had previously been resharpened. The search for additional patterning and its implications for our understanding of Paleoindian cultural systems will be examined in our continuing analyses.

ACKNOWLEDGEMENTS

This research was supported by a grant from the Social Sciences and Humanities Research Council of Canada. We would especially like to thank the landowners, Mr and Mrs Charles Bolton, Mr and Mrs Ed Bolton, and Mr Richard Murphy, for their assistance. We also thank Darcy Fallon and Jim MacLeod for bringing some of these sites to our attention.

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INVESTIGATIONS AT THE STOCKADE BARRACKS, PRESCOTT, ONTARIO

Paul Fortier and Peggy Smyth

In 1990 the Ottawa Chapter of the Ontario Archaeological Society entered into a cooperative venture with the Stockade Barracks & Hospital Museum in Prescott to investigate a resource of potential historical significance adjacent to the Stockade Barracks complex (BdFv-2). The proposed archaeological research project was meant to determine the nature of structural remains uncovered during recent archaeological survey work. The project was supported by a grant from The Ontario Heritage Foundation.

The Stockade Barracks itself is something of an enigma. Despite being the oldest surviving barracks building in Ontario and the second oldest surviving military building in the province, the site and its historical significance were virtually unknown and unrecognized until 1979. Based on historical research conducted by the Grenville County Historical Society, The Ontario Heritage Foundation marked the site with a commemorative plaque in 1979.

The surviving two-storey structure at 356 East Street, Prescott, was the main structure in a complex of buildings known as the Stockade Barracks. Major Edward Jessup, founder of the Town of Prescott and loyalist veteran of the American Revolution, began construction of the stone building in 1810 as a schoolmaster's residence. During the summer of 1812, the unfinished structure was appropriated by the local militia because it occupied a commanding position of the river and would serve well as a barracks building for the expanding Prescott garrison. Prescott was located opposite the American base at Ogdensburg, New York.

The militia artificers spent the remainder of the summer completing the building and constructing a stockade wall with bastions around it. Until Fort Wellington was constructed later in the war, the Stockade Barracks held a key position in the defence of the upper St Lawrence River. Even after the construction of Fort Wellington, just 240 yards to the east, the Stockade Barracks continued to play an important role in the Prescott garrison (figure 1).

After the War of 1812 the main stone building became the garrison hospital for Fort Wellington. In 1823, as the requirement for a garrison at Prescott diminished,

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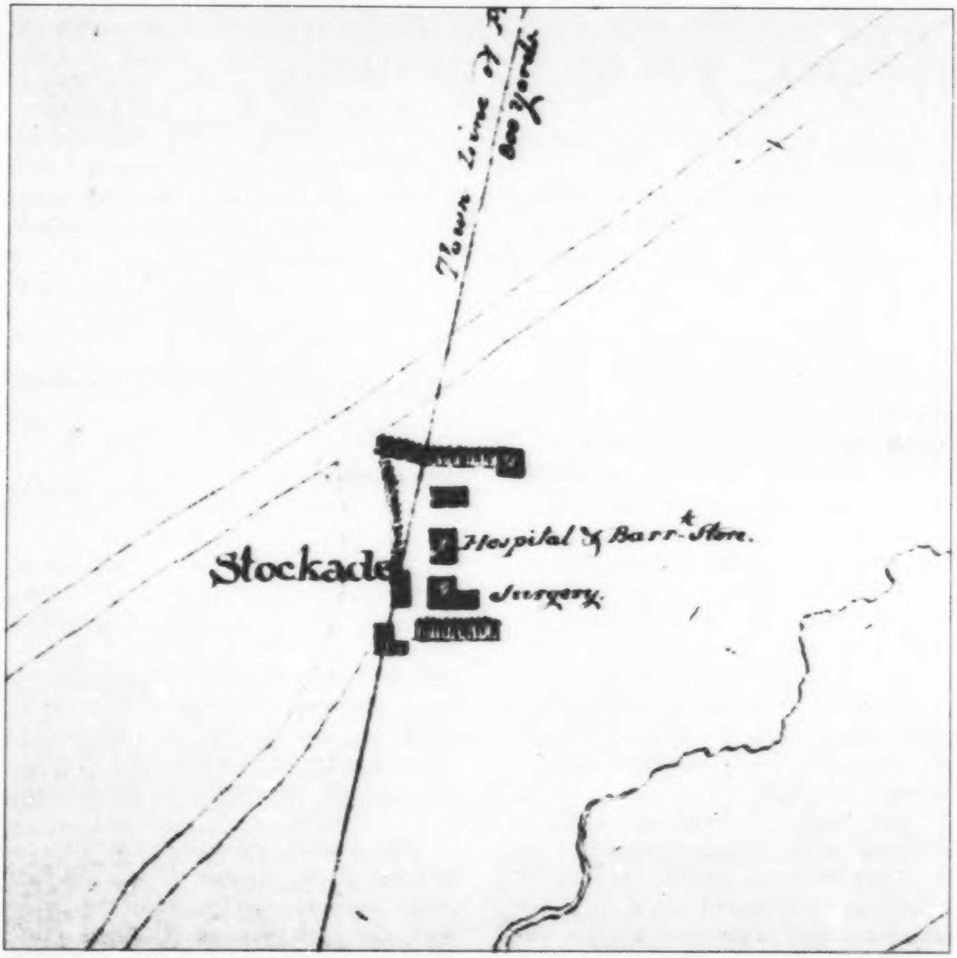

Figure 1: Plan of Fort Wellington prepared by Lieutenant Joshua Jebb, Royal Engineers, 1816 (National Archives of Canada, Cartographic and Architectural Archives Division, C 21312). Central structure marked Hospital and Barr^{k} Store has survived to the present day.

the property was sold by the military for civilian use. The first owner was the Reverend Robert Blakey, the first Anglican minister in the area. Blakey served as chaplain to Fort Wellington, which continued the building's association with the military.

Once the historical significance of the property became known, interest in the archaeological resources of the site developed (Fortier 1987). At the request of the Local Architectural Conservation Advisory Committee and the Grenville County Historical Society, the Regional Archaeologist's Office of the Ministry of Culture and Communications conducted an archaeological investigation at the site in 1979. Headed by Peter Englebert, the survey confirmed the military association of the property and attempted to find vestiges of the surgery structure, which was an important ancillary building in the Stockade Barracks and hospital complex. The excavation was quite successful in corroborating the historical record and in determining the location and limited structural details of the surgery. As well, a considerable amount of early nineteenth-century material was uncovered, including several military-specific artifacts directly associated with the War of 1812.

Restoration of the privately owned Stockade Barracks structure began in 1983. The building was opened to the public as a historic attraction in 1990. Plans for a parking facility for the historic site required a survey of the area proposed for development, and in 1989 the Cataraqui Archaeological Research Foundation was contracted to conduct the survey. Little of significance was found, with the exception of a feature of rubble stone with associated mortar that was located approximately 8 metres to the northeast of the historic structure (Bazely 1989). Although there is no mention in the historical record of a structure in this particular location, the feature could be associated with the War of 1812 occupation of the site, and Cataraqui recommended further study.

Peggy Smyth of the Ottawa Chapter of the Ontario Archaeological Society developed a research methodology that would allow for the mitigation and analysis of the feature and an assessment of the topography. Since the site is located in the midst of an urban area that has seen active and continual use since 1810, it was suspected that the topography may have been disturbed and altered considerably.

Excavations were conducted over seven weekends in August and September 1990, with a cleanup weekend on 20 October. Members of the Ottawa Chapter, Ontario Archaeological Society, and interested members of the public were invited to participate (figure 2).

Figure 2: Excavating at the Stockade Barracks, 1990

The excavation grid was laid out in such a way as to determine the orientation of the rubble feature identified by Cataraqui and to expose any other feature associated with it. Three areas were opened: A, B, and C. At the time of writing, analysis and interpretation of the season's work was just beginning. It is suggested that the stratigraphy in areas A, B, and the north half of Unit C-N4E1 records the purposeful infilling around the foundation of the extant structure, possibly for landscaping purposes. As the south half of

Unit C-N4E1 and all of Unit C-N2E1 contain no evidence of this apparent infilling sequence, the infill in areas A, B, and the north half of C may have been pushed up from the east and south part of the yard to form a ridge or terraced area. It is difficult to determine when this may have occurred because of the mixture of nineteenth- and twentieth-century artifacts.

Although no evidence of temporary structures from the War of 1812 was uncovered, two military buttons dating from the period were excavated. One is a rare engraved brass button with an anchor motif, which may have been associated with the Royal Navy, Provincial Marine, or Royal Marine occupation of the site. The second button is a plain, unmarked pewter button of militia association.

The study revealed that valuable archaeological resources would not be disturbed by the proposed development at the site. While limited evidence of occupation during the War of 1812 was obtained, no traces of structural elements from the several semi-permanent buildings, the stockade, or the bastions were uncovered. Indeed, the investigations confirmed the historical record, verifying that the rubble feature was not related to the War of 1812 but rather was the result of some later landscaping activity at the site.

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ARCHAEOLOGICAL WORK AT WILBER LAKE, RENFREW COUNTY, ONTARIO

Barry M. Mitchell

Explorations at Wilber (Mud) Lake, which began in 1986 (Mitchell 1987, 1988, 1989), were intended to obtain additional artifact samples from the Kant site originally discovered and recorded by Wintemberg in 1917; to compare the new sample with that previously obtained in 1947 (Emerson 1955); and to test to determine the geographic extent of the eastern portion of the site.

The Kant site is primarily a Middle Woodland deposit occupying the northeast shores of Wilber Lake. About 0.5 kilometres of the most westerly portion of the site occurs in Borden block BjGh-1 (Borden 1952) and has been referred to as the "point" area (Wintemberg 1917). The most easterly portion of the site, which also encompasses about 0.5 kilometres, occurs in Borden block BjGg-1 and has been referred to as the "ridge" area (Wintemberg 1917). A succession of changes in ownership and rental precluded any work on the western portion of the site (BjGh-1) during the 1986–90 seasons.

At the beginning of the 1990 field season, the ridge (BjGg-1) deposit was known to extend 1 kilometre further south along the east shore of Wilber Lake than recorded by Wintemberg (1917), Emersòn (1955), or Mitchell (1987), and an adjacent deposit, located on the north shore of the outflowing Bonnechere River, was registered as the Duquette site (BjGg-4) (Mitchell 1988). The aims of the 1990 fieldwork were to complete testing of the Kant "ridge" (BjGg-1), to obtain a larger sample of material from the Duquette site (BjGg-4), including faunal, flotation, and charcoal samples, and to survey the remaining shorelines of Wilber Lake to determine whether other sites are present.

EXCAVATION

A crew of two permanent and two part-time assistants excavated four test units of various sizes on the easterly portion of the Kant Site and twenty-four 1.5 metre square units and six test units of various sizes at the Duquette site. The writer and another part-time assistant conducted lakeshore surveys over a period of three days. A grant from The Ontario Heritage Foundation supported the fieldwork and special analytical expenses.

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RESULTS

Excavation at the Duquette site recovered interior-punctated, exterior-noded rimsherds from two Pickering vessels (Wright 1966, 22; Kenyon 1968, 50). Some exterior decorative attributes are similar to those listed by Kenyon on pottery types from the Miller site described as Linear Dentate Stamped and Punctated. Both Pickering vessels from the Duquette site display linear stamping above the exterior punctates, one a criss-cross motif, the other a chevron motif.

A radiocarbon date on wood charcoal associated with the Pickering rims is AD 961±90 (S-3276). This agrees well with the seriation estimates for similar rims at the Miller site (Kenyon 1968), and also with dates of AD 962±80 (GSC-85) obtained by Wright (1966, 48) from the early Pickering-Blackduck stratum at the Pic River site and AD 260±40 (S-1688) obtained by Brizinski (1980) from stratum 2 of the Frank Ridley site (BbGw-3).

Middle Woodland ceramics were also recovered from the Duquette site. Decorative techniques included dentate stamp, pseudo scallop shell, cord-wrapped stick, rocker stamp, and instances of interior punctation with or without exterior nodes.

Lithic artifacts recovered from the Duquette site are predominately scrapers, but include rare projectile, drill, and knife forms. Cultural assignment of the scrapers is under investigation.

Historic items recovered from the Duquette site include iron fish spears, gun flints, beads, and clay pipe fragments.

Two new sites were discovered by survey along the south and west shorelines of Wilber Lake. Also, a deposit of calcined bone and a possible check-stamped body sherd were recovered at the extreme western border of the Duquette site.

SUMMARY

At the close of the 1990 field season, ceramic material from the Duquette site indicates the presence of Middle Woodland, Pickering, Middleport-like, and Historic components. Unfortunately, the site has been disturbed. Late Woodland has been intrusive into Middle Woodland, and Historic into both.

A problem with the Late Woodland component at the Duquette site arises from the possible association of white tubular glass beads with ceramics (pottery rims and a pipe) that are identifiable as Middleport, using the typology established by MacNeish (1952). Either disturbance has mixed the two artifact types or the site was occupied by Algonkian groups using pottery with some borrowed Middleport decorative motifs. While the radiocarbon age of 400 years BP (S-3207) gives a very acceptable one sigma date of AD 1360 for the presumed Middleport-like ceramics, the large standard deviation of 190 years makes a later (historic) date feasible also.

FUTURE WORK

Archaic occupation is indicated in the study area by the presence of diagnostic gouges, ulu-forms, and ground slate points in local collections. The source of these items is a continuing quest.

Additional exploration of the western limits of the Duquette site is planned for the 1991 field season. Test work will also be conducted on the recently discovered North Peninsula site (BjGh-2). This site appears to be undisturbed except for forest growth.

The archaeology of Wilber Lake will be a key contribution in determining the prehistory of northeastern Ontario.

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EXCAVATIONS AT THE HUNTER'S POINT SITE, BRUCE PENINSULA, ONTARIO

James Molnar

The Hunter's Point site (BfHg-3), a Middle and Late Woodland period hunting and fishing camp, was investigated over a period of seven weeks. The fieldwork, supported by a grant from The Ontario Heritage Foundation, was a combination of pre-liminary assessment and mitigation, since the site had only been discovered in October 1989 and is threatened by cottage development in the next few years.

Hunter's Point is located on the Georgian Bay side of the Bruce Peninsula and just below the Niagara Escarpment. The site is in open forest that has been both burned and logged over the past one hundred years, but these events seem to have had surprisingly little impact on artifact distribution.

The habitation area is 1.5 hectares in extent and is situated on a relict strand of dolostone cobbles. The interior of the point contains numerous smaller beach ridges and swales that follow the outline of the point. There has been little soil development, and artifacts lie just on or beneath the cobble surface. Cultural materials occur in discrete concentrations across the site.

Figure 1A–D presents the distribution of artifacts and animal bone in one 15 square metre surface collected area (420N100E). Figure 1A depicts at least eight vessels broken and discarded in place. The remainder of the sherds from these vessels are probably just under the surface and will be recovered in future excavations. Figure 1B is a plot of calcined chips of large mammal bone, all under 2 centimetres in length. The tight cluster of material may be the result of a single episode of processing long bone for removal of marrow or grease. Fish remains also appear to have been deposited during a single processing event (figure 1C). Various taxa identified by Rosemary Prevec from this area include: longnose/white sucker, white-fish/cisco, walleye/sauger, lake/brown trout, burbot, and sunfish. Lithic material has the most diffuse distribution in this area of the site (figure 1D) and probably represents area scatter and not the discard of waste materials as with the other artifacts.

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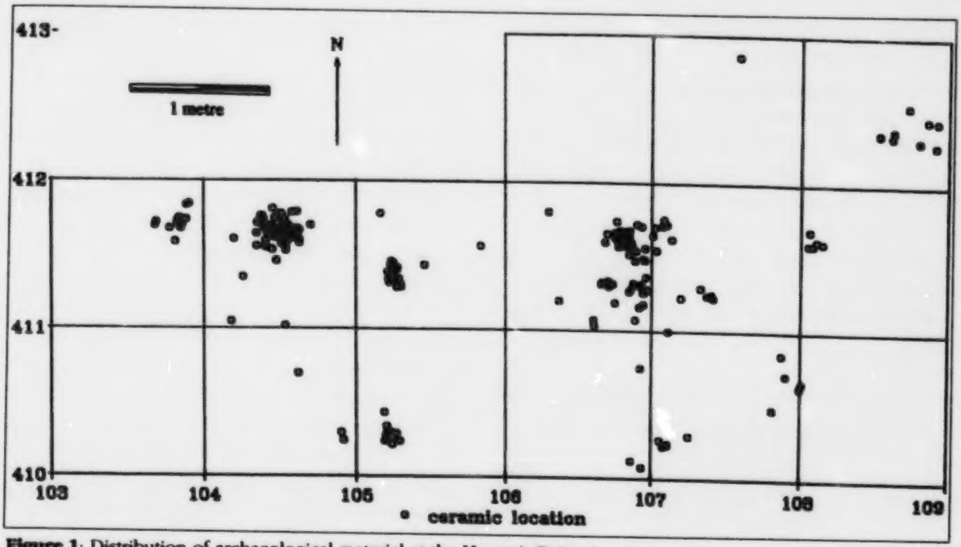
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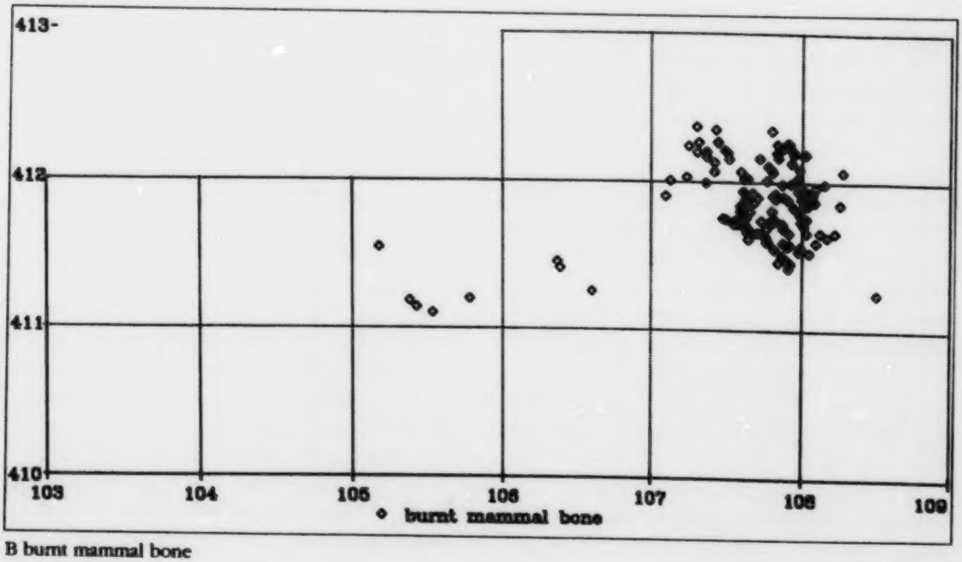
● ceramic location

Figure 1: Distribution of archaeological material at the Hunter's Point site: A ceramics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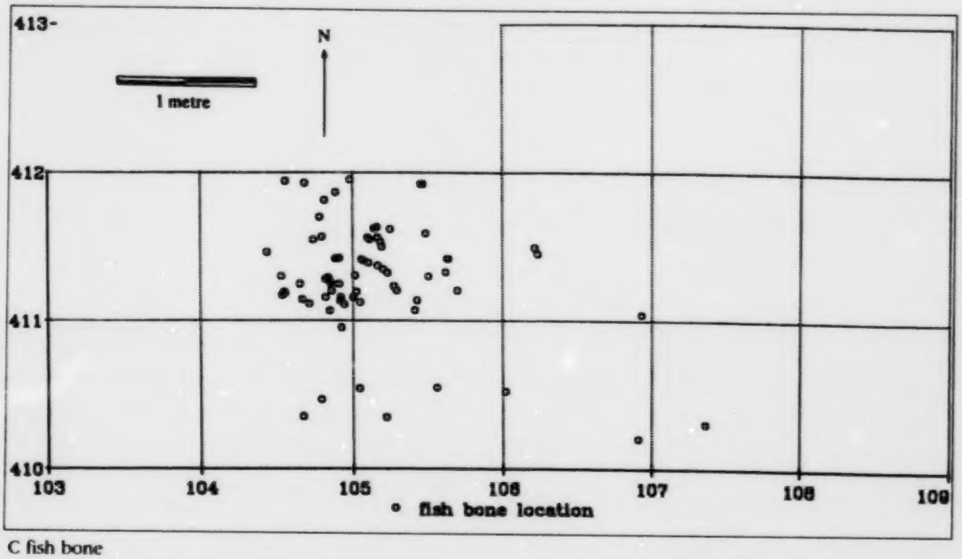
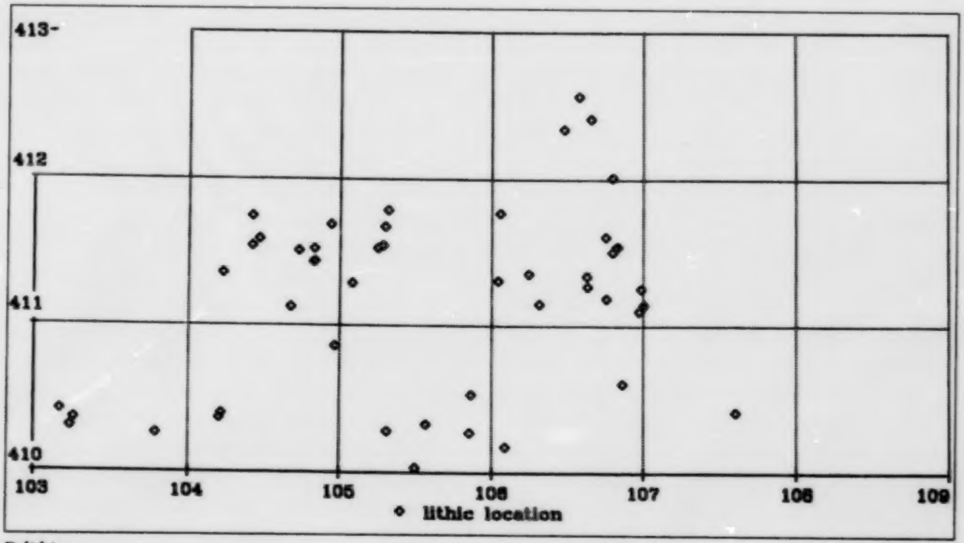


C fish bone



D lithics

Artifact distributions similar to those in this area occur across the site. Although the surface of the site is rich, there are no real middens either in the interior or along the edge. Artifacts seem to have been discarded at the end of each activity period with little concern for concentrating the refuse in a single area, hence the patchy distributions. Hunter's Point was apparently not occupied intensively enough for the occupation/activity areas to overlap or blend together. For this reason, I am inclined to interpret the site as a temporary fishing and hunting camp. The exposed location and rocky living surface support this interpretation.

To the west of the area discussed above, excavations were begun after surface collection. The crew opened 46.5 square metres, working in contiguous blocks of 1 metre squares excavated in 5 centimetre levels. Diagnostic artifacts were piece plotted and all soil water screened. The ratio of cobbles to soil by volume was 1:1 at the surface, with a 3:1 or 4:1 ratio at the third level. While the rocks made excavation difficult, I suspect they contributed to the excellent faunal preservation, since the lime would buffer the natural acidity of forest soil and rainwater.

Most artifacts diminished in frequency in the second level, and by the third level, 10 to 15 centimetres below surface, only small lithic pieces and Middle Woodland microsherds were recovered. This, I think, is not a true stratigraphy, since as many Middle Woodland sherds were found on the surface as were excavated. It may be that, with time, the microsherds in level three gradually percolated downward through the rocks. In addition to the Middle Woodland cord-wrapped stick-impressed sherds, a substantial amount of Huron Incised and Sidey Notched sherds from a Late Woodland Odawa occupation were also recovered.

A date for the Late Woodland Odawa use of the site is suggested by two trade axes that match those from the AD 1630–50 period (Kenyon and Kenyon 1987). Other metal trade items are knives and pieces of worked kettle scrap. One piece of trade metal (figure 2) was fashioned into a bracelet shape and incised with motifs resembling the underwater horned serpent of Algonkian myth (G. Rajnovich, personal communication).

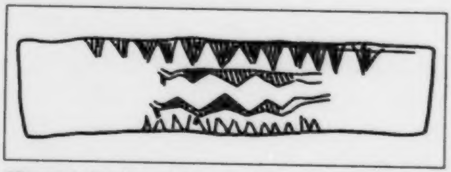


Figure 2: Trade metal piece with incised motifs

One of the last areas investigated contains a number of depressions in a beach line similar to what have been called puckasaw pits found on cobble beaches further north on Lakes Huron and Superior (Fox 1990, 470). The pits at Hunter's Point occur around the site perimeter and are estimated to be sixty in number. Approximately one-quarter of one of these pits was excavated and was found to contain pieces of two Late Woodland vessels as well as fish and bird bones. Immediately surrounding the artifacts were flat limestone slabs set on an angle, suggesting a lining for a storage pit.

Hunter's Point has produced a rich and diverse artifact assemblage. Specific activities such as fish and mammal processing and even primary lithic reduction are preserved in the artifact distributions. With continued excavation, Hunter's Point will greatly illuminate our understanding of past Native lifeways in Ontario.

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LAKE OF THE PAINTED CAVE: CURRENT RESEARCH

Brian Molyneaux

The analysis and interpretation of a painted rock formation and cave complex in the Lake of the Woods region by Dr Brian Molyneaux continues in the Department of New World Archaeology at the Royal Ontario Museum, with additional computing support from the University of Southampton, England.

Rock paintings at the site were discovered in the course of a rock art survey in 1980. In 1981 initial recording and mapping were carried out, along with a test excavation of the cave floor. The goal was to determine whether remains of activities connected with the production and use of the paintings were buried in the deposit. The initial results indicated that what had originally appeared to be simply a rock painting site was a complex of constructed and painted rock features, some of which were on the cave walls and ceiling and others on the floor (figures 1 and 2).

As the cave was a highly complex activity area, the 1982 project was devoted to the precise mapping of the three-dimensional space, the recording of the rock features and their paintings, and a more extensive excavation. If pigment debris was found in association with datable natural or cultural material, it would be possible to date at least one painting activity — an achievement with significant ramifications for the study of Canadian Shield rock art as a whole.

The initial results of this fieldwork are still being evaluated, as the site appears to be even more complex than first suspected. In addition to the surface rocks, arranged and painted in various ways in the central area of the cave (see figure 2), additional painted rocks were discovered buried in association with ochre and sheets of mica in the soil and gravel deposit below a painted ceiling. These objects appear to have been preserved *in situ* and thus may suggest relative dates for various human activities in the cave. In addition, charcoal occurring within an ash deposit associated with some of the painted rocks provides an opportunity for radiocarbon dating.

In 1990 work was begun on the spatial analysis of the paintings, structures, and other features in the site, with the goal of determining the relation between surface and subsurface features — whether the evidence represents a

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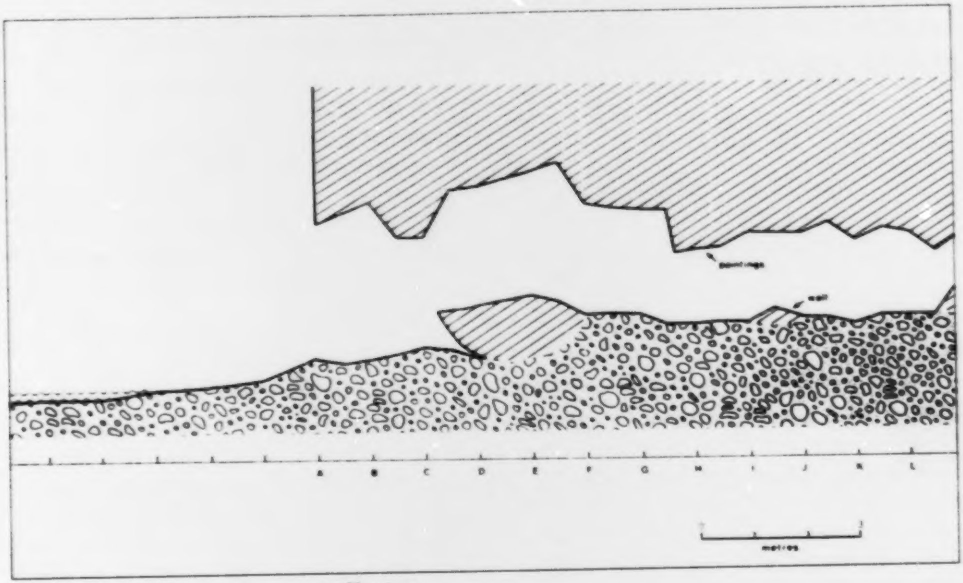
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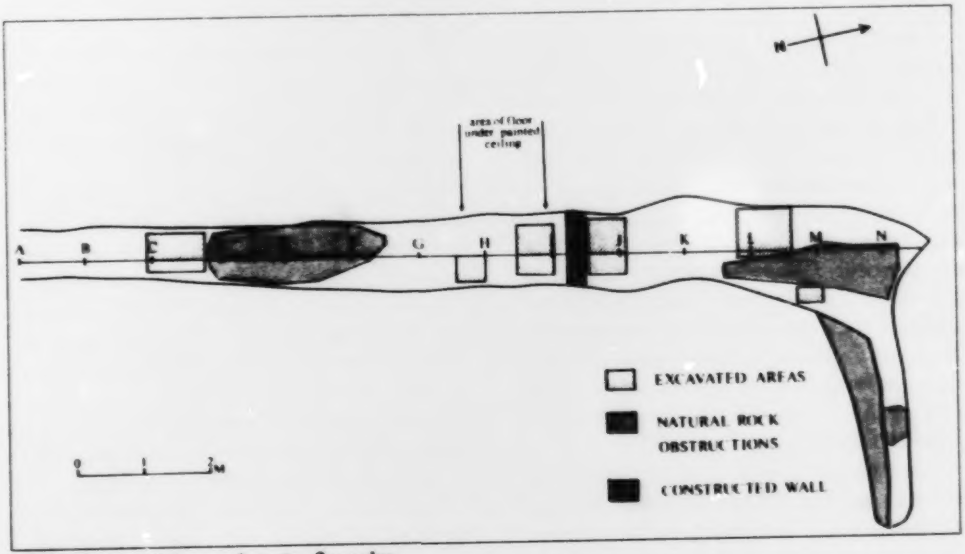
Figure 1: Painted Cave rock cavity, profile view


N
area of floor under painted ceiling
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EXCAVATED AREAS
NATURAL ROCK OBSTRUCTIONS
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Figure 2: Painted Cave rock cavity, floor plan

single event or a set of associated activities that have taken place over time. This task has required the development of a computer-based, three-dimensional model of the site. The information for this model is derived from the basic photographic record of the excavation, which consists of colour stereo-photographs taken for every 1 centimetre of depth and after any removal of artifacts or features. The work on this model continues and is expected to be completed by mid 1992.

The advantage of such a dynamic model is that the information from the site — the arrangement of artifacts and cultural features in the three-dimensional matrix of the cave deposit — can be visualized in different ways and manipulated on the computer screen, making it possible to experiment with alternative scenarios for the creation, use, and subsequent history of the site. As these scenarios are, in essence, hypotheses about social behaviour in a physical setting, they may then be compared to behaviour at other rock art sites and within sacred and secular contexts in Algonkian culture.

POLLEN CORING ACTIVITIES AT THE SHEGUIANDAH SITE, MANITOULIN ISLAND

Peter L. Storck, Patrick J. Julig, and Thane W. Anderson

Fieldwork to extract a pollen core from the site of Sheguiandah (BlHl-2) was carried out in late November 1990. The coring was done for two reasons: to support research being conducted at the time by Julig (involving a re-analysis of selected artifacts and sediment samples obtained by Thomas Lee during the initial excavations at the site in the early 1950s); and as a first step in an anticipated joint excavation project to be conducted by Julig and Storck in the spring of 1991.

Previous pollen analysis by Jan Terasmae (Lee 1957) produced a pollen diagram from the peat deposits in swamp 3 on the site (figure 1). This diagram documents some aspects of the late glacial and postglacial vegetation in the site area and broader region. However, the pollen content and geological characteristics of the mineral sediments below the peat are less well known. For this reason, the coring described in this report was conducted primarily to sample these mineral sediments. It was hoped that these sediments would provide more abundant pollen and macrobotanical data and organic material for AMS radiocarbon dating (using extraction and dating techniques not available to Lee or Terasmae), as well as information about the geological origin of the sediments. It was anticipated that these data would be helpful in determining the age of the human occupation(s) at the site, one of the most important unresolved questions raised by Lee's work.

In an attempt to re-examine the same stratigraphic sequence reported by Lee, John Sanford (1957), and Terasmae, the coring in this study was conducted within 1 or 2 metres of the test trench Lee excavated in swamp 3 (Lee 1957, figure 2; see also figure 1 in this report). In fact, one of our cores passed through a large chunk of wood at the boundary between the peat and the underlying mineral sediments that Lee intersected with his test trench.

The first coring attempt with a 7.5-centimetre diameter Livingston sampler was only partially successful since the

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Permit to work on a designated site

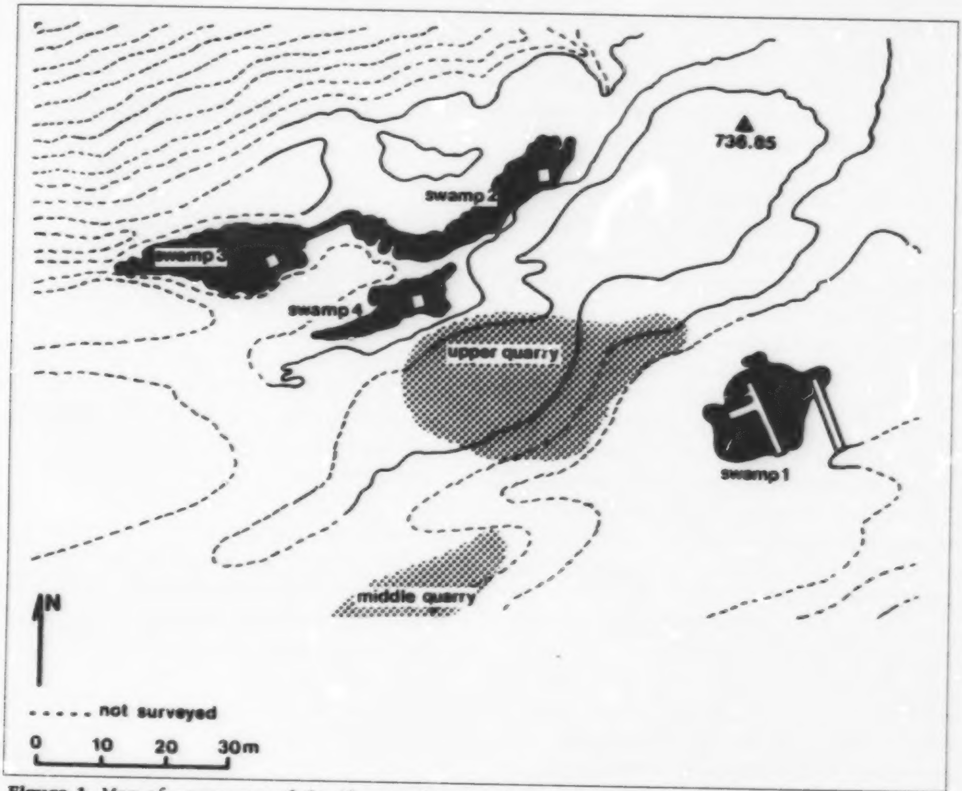

Figure 1: Map of upper part of the Sheguiandah site showing locations of swamps 1–4 and excavations conducted by Thomas Lee between 1950 and 1953 (open squares and rectangles). The coring described in this report was conducted adjacent to the west wall of Lee's test square in swamp 3. Map adapted from Lee (1957), figure 1, p. 130.

sampler could not be forced through the full thickness of mineral sediments believed to be present. Several other attempts were made with a 5-centimetre sampler. These produced longer cores, but did not reach the stratum of sand and gravel that Lee reports overlying bedrock. All together, five cores were taken, one which is 7.5 centimetres in diameter and four which are 5 centimetres in diameter. One of the 5-centimetre cores contains the large fragment of wood mentioned earlier.

The five cores that were extracted were taken to Laurentian University by Julig for sampling in preparation for analysis. Six organic samples (wood, peat, and plant fragments) were submitted to IsoTrace Radiocarbon Laboratory (University of Toronto) for AMS radiocarbon dating. Julig will also conduct textural analyses of the sediments in collaboration with Dr William Mahaney (Department of Geography, York University). Storck will study any microdebitage that is obtained from the sediments. Small samples of sediment taken from two of the cores at 10-centimetre intervals (and smaller intervals where appropriate) have been sent to Anderson for analysis of any pollen and macrobotanical material that is present.

ACKNOWLEDGEMENTS

Fieldwork at Sheguiandah was conducted under a permit issued by the Minister of Culture and Communications to P. Storck for work on a designated archaeological site. Partial funding for field expenses (for Storck and Anderson) was provided by the Royal Ontario Museum. Radiocarbon dating and some laboratory expenses will be funded by grants awarded to P. Julig by The Ontario Heritage Foundation and the Social Sciences and Humanities Research Council of Canada.

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ARCHAEOLOGICAL ACTIVITIES AT SAINTE-MARIE AMONG THE HURONS AND THE HERON SITE

Jeanie Tummon and W. Barry Gray

Four years of excavations and research have discovered and confirmed the presence of a multicomponent site on the property that includes and surrounds the seventeenth-century French Jesuit mission community of Sainte-Marie Among the Hurons. The data suggest that this site complex (Lot 16, Concession 3, Tay Township) has been used by a variety of cultural groups for several activities from the thirteenth century AD to the historic period. Because of this use, the authors feel that this property should be described not simply as a multicomponent site but as an "Archaeological District" or "Heritage District," following the Guidelines of the National Register of Historic Sites, United States, 1968. The seventeenth-century site of Sainte-Marie is significant to the cultural and archaeological history of North America, while earlier and later use of the same property is important at the local and provincial level (figure 1).

The seventeenth-century site of Sainte-Marie (BeGx-1) has been the subject of several excavations over the years, most notably by Kenneth E. Kidd of the Royal Ontario Museum, 1941–3, and Wilfrid and Elsie Macleod Jury of the University of Western Ontario, 1947–51. In 1987 Sainte-Marie Among the Hurons contracted Archaeological Research Associates Ltd to conduct excavations on the property under the direction of Dr Dean Knight and Barry Gray. Archaeological excavations have focused on the southern portion of the reconstructed mission settlement (between the two stockades) which is described as the non-Christian area (figure 2). Testing was also conducted to the north, inside the Christian Native area and inside the northern portion of the non-Christian area. This testing was done to evaluate the nature of the archaeological remains, the soils, and the degree of recent disturbance inside the reconstruction in order to establish comprehensive strategies for future investigations.

Generally speaking, the archaeological data from Sainte-Marie are from very mixed or disturbed contexts as a result of farming, archaeological, and reconstruction activities. No undisturbed subsurface features dating before the mid twentieth century have been discovered on the site since 1987, with the exception of hundreds of small, shallow post

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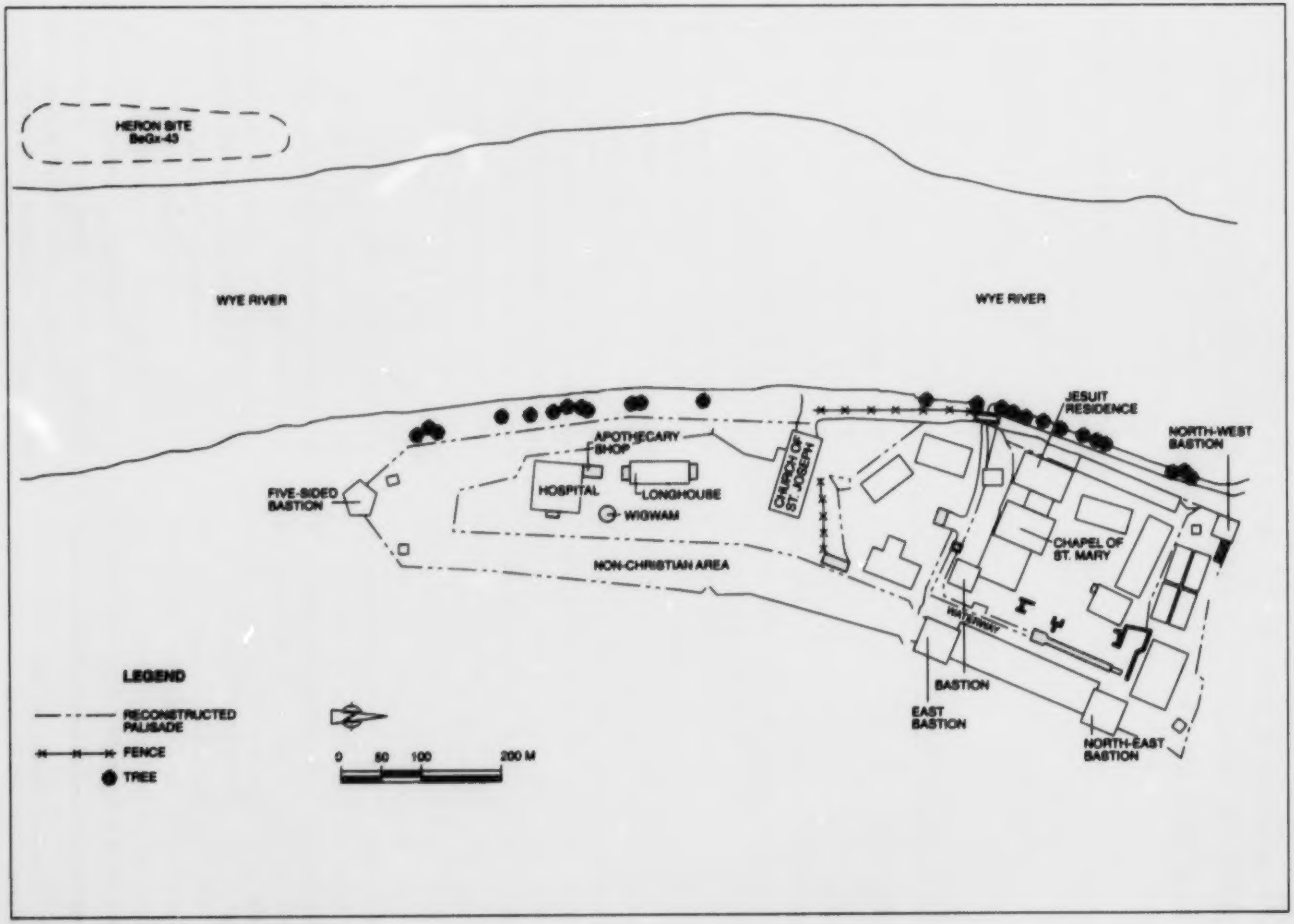
HERON SITE
BeGx-43
WYE RIVER
WYE RIVER
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FIVE-SIDED BASTION
HOSPITAL
LONGHOUSE
WIGWAM
NON-CHRISTIAN AREA
CHURCH OF ST. JOSEPH
JESUIT RESIDENCE
NORTH-WEST BASTION
CHAPEL OF ST. MARY
WATERWAY
BASTION
EAST BASTION
NORTH-EAST BASTION
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RECONSTRUCTED PALISADE
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Figure 1: Sainte-Marie Among the Hurons

moulds. Over 25,000 severely fragmented, small artifacts, representing material culture spanning eight centuries, have been recovered from the excavations at Sainte-Marie. Despite the large amount of disturbance and landscaping of the property, the distribution of these small artifacts is extremely useful as an interpretive tool for deciphering each archaeological component.

The west bank of the River Wye was tested during the 1990 field season. This work resulted in the identification of another multicomponent site, the Heron site (BeGx-43) (figure 1), that has been attributed to the Archaeological District mentioned above. This site was first used during the fourteenth century, with subsequent occupations in the sixteenth, seventeenth, nineteenth, and twentieth centuries. The nature of the Heron site data is important to the analysis of the material from Sainte-Marie because it represents an almost mirror image of land use and is from a less disturbed context. Over 10,000 artifacts were recovered from the ploughzone and from several subsurface features at the Heron site during 1990.

The authors, along with several independent researchers, are carrying out research and analysis at Sainte-Marie Among the Hurons. These researchers include Andrew Clish (computer graphics), Karlis Karklins (beads), John Letts (archaeobotany), Dr David Smith (Native ceramics), and Dr John Tomenchuck (lithics).

Present research of the data from Sainte-Marie Among the Hurons and the surrounding area (including the Heron site) reveals a long and complex history. A brief outline of the preliminary results is presented below.

The ceramics study indicates that the southern portion of Sainte-Marie may have been initially occupied by peoples of the Pickering Branch during the Early Ontario Iroquois stage (AD 1000–1300). There is also evidence for a later occupation during the Middleport substage (AD 1300–1400) of the Middle Ontario Iroquois stage. The Middleport substage also represents the earliest occupation/component of the Heron site located on the west bank of the river.

The next occupation occurred during the Late Ontario Iroquois stage (AD 1400–1650). Northern Division Huron ceramic sherds are present at both the Heron and the Sainte-Marie sites, though the quantities are small compared with the amount of Middleport material. During the Jesuit occupation (AD 1639–49), the southern portion of the Sainte-Marie site appears to have had very little use compared with earlier and later occupations. The Heron site also appears to have had very little use during the Jesuit occupation of the area.

After the abandonment of the French community by the Jesuits in 1649, the Archaeological District encompassing the Sainte-Marie and the Heron sites does not appear to have been used to any great extent until the early part of the nineteenth century. In 1828 following the transfer of Drummond Island to the United States, the British military garrison and voyageurs stationed on the island moved to Penetanguishene, Ontario. At least eleven individual voyageurs from this group have been listed as living or settling at or near the "Old Fort" (the remains of the seventeenth-century mission community). The nature and extent of this occupation is still somewhat ambiguous,

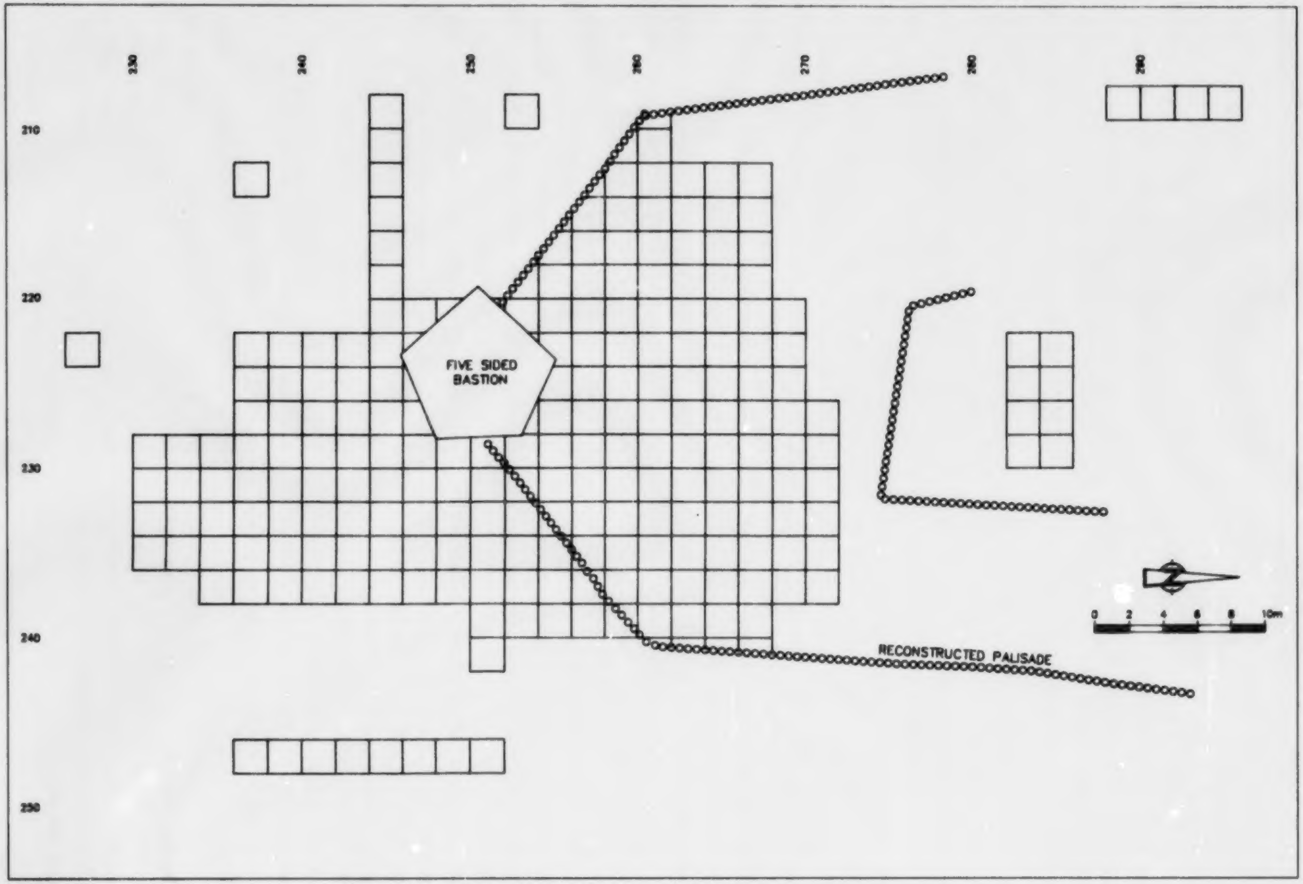
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Figure 2: Archaeological Excavations, 1987–90 (South End), Sainte-Marie Among the Hurons

Much later, c.1870, a lumber mill was established along the west bank of the River Wye. This mill seems to have been in operation for at least twenty years, and a settlement known as Bruneauville Station was associated with it. Recent excavations uncovered evidence of mid to late nineteenth-century structures along both sides of the river.

During the first half of the twentieth century, after the demise of the lumber industry along the banks of the Wye, the Sainte-Marie–Heron Archaeological District was returned mainly to farming activities. A farmhouse and numerous outbuildings, including an occasional cottage, boat-house, and docks, were built on both banks of the river. The farmhouse on the east bank of the river was located in the area of the reconstructed mission community now known as South Court. This farm was owned and used by a local entrepreneur as a hunting preserve for himself and his friends. During the course of some of the excavations at Sainte-Marie, and later when the Jesuit Order of Canada and the Province of Ontario began reconstructing the mission community, all modern buildings standing within the immediate area along both river banks were removed.

This present study of land use represents a new direction for research related to the seventeenth-century mission community of Sainte-Marie. The broader study of land use and review of documentary and archaeological information known to date are yielding much information relating to the Jesuit occupation of 1639–49. A major study detailing all aspects of this research is planned for completion in 1992/3.

A POSSIBLE MATOUWESKARINI HUNTING CAMP: EXCAVATIONS AT THE HIGHLAND LAKE SITE, RENFREW COUNTY

Alexander von Gernet

During his trip up the Ottawa River in 1613, Samuel de Champlain passed near the mouth of a substantial river (at the present-day site of Arnprior) and noted the presence of a Native people called the *Matou-oHescarini* (Biggar 1922–36, II, 271). Based on this account, as well as seventeenth-century cartographic evidence, it has been inferred that a considerable portion of the 5000-square kilometre area drained by the Madawaska River was the late prehistoric and early historic period homeland of the Matouweskarini band of Ontario Algonkians (Day and Trigger 1978, 792–3; Hessel 1987, 19–20; Kennedy 1970, 159–60). The Madawaska River descends 350 metres from its source in Algonquin Park and follows a 260-kilometre, rapid-filled course before finally emptying into the Ottawa River (figure 1). Much of the drainage is known as the Madawaska Highlands — a region characterized by undulating terrain, with swamps, Shield outcrops, and peaks reaching 450 metres.

The Madawaska Highlands have not seen the type of intensive archaeological scrutiny now common in much of southern Ontario. However, a number of sites have been identified near the headwaters of the Madawaska River in Algonquin Park (Hurley and Kenyon 1970; Hurley et al. 1972). Various points on the stretch of the river between Combermere and Griffith have been examined by Phillip J. Wright and Peter Engelbert (Wright 1977; Wright and Engelbert 1980). The area was revisited by Chris Anderson and Bruce Jamieson in 1981, during a reconnaissance survey of a proposed waterway park (Jamieson 1981). Their work was confined to the shorelines of the river, and although some interesting sites were discovered, many appeared to have been destroyed by fluctuating water levels.

Ninety-five kilometres upstream from Arnprior, a minor waterway known as Highland Creek empties into the Madawaska River (figure 1). At a point 15 kilometres from the Madawaska and 300 metres above sea level, the creek drains the isolated Highland Lake. In the spring of 1990 a series of fortuitous circumstances led to the discovery, in the shallow waters of the lake, of a complete,

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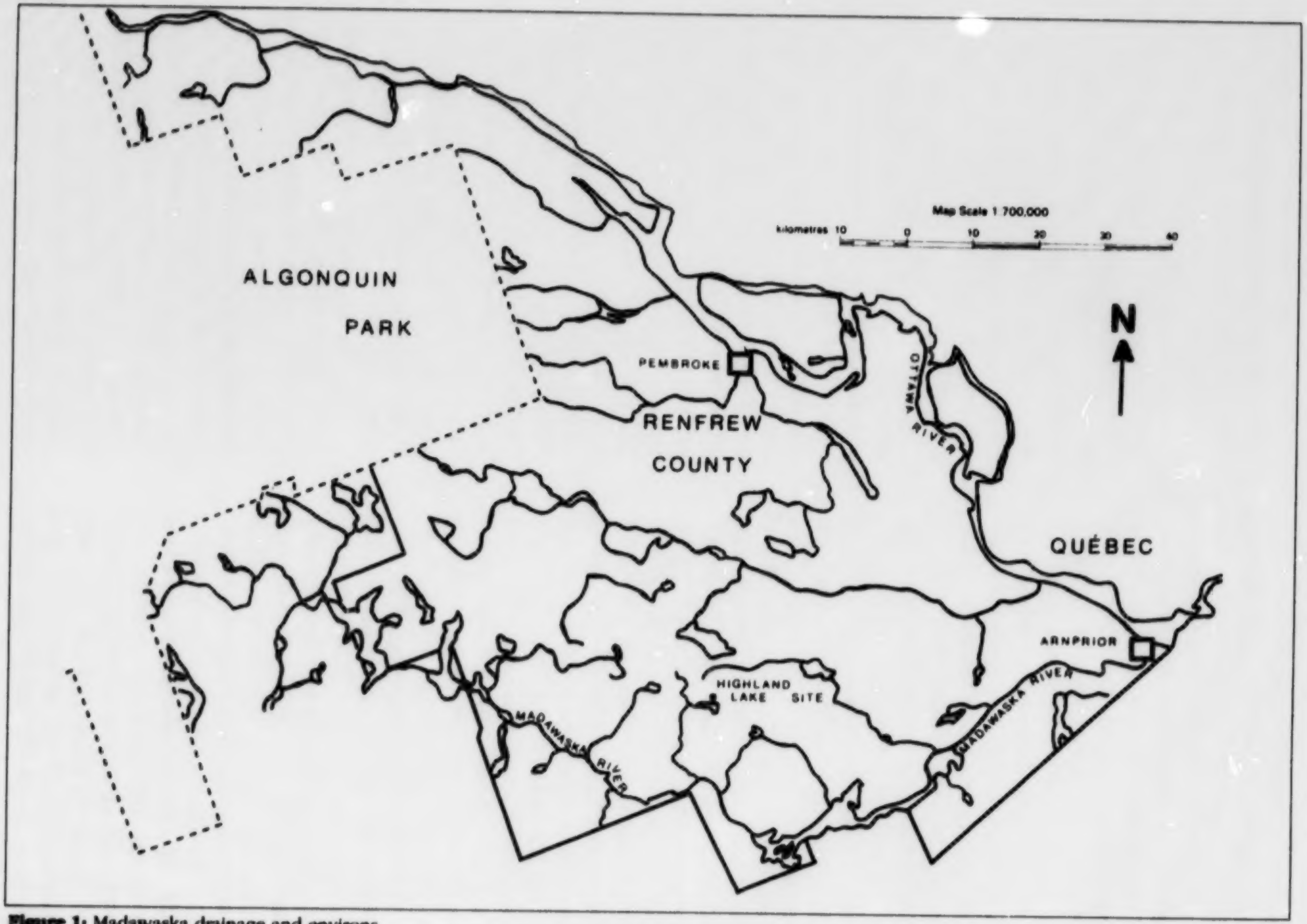
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ALGONQUIN PARK
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ARNPRIOR
HIGHLAND LAKE SITE
MADAWASKA RIVER
MADAWASKA RIVER

Figure 1: Madawaska drainage and environs

Iroquoian trumpet-pipe bowl featuring exceptional workmanship (von Gernet 1991). In all morphological attributes, the pipe is indistinguishable from specimens ubiquitous on late prehistoric Huron sites (eg, von Gernet 1985, 23, plate 3). While no test pitting or formal excavations were attempted, additional cultural remains were clearly indicated in the soil profile of the eroding lake shoreline. Artifacts and miscellaneous midden debris were literally falling into water as wave action disintegrated loose organic soils. It was decided to mitigate the Highland Lake site (BiGh-1) and, with the cooperation of the Ministry of Natural Resources, plans were made to return later in the summer for excavation.

Access to the lake is exceedingly difficult and requires both a four-wheel-drive vehicle and a boat. Although logistics precluded an intensive field season, a team of four archaeologists was able to spend two weeks at the site in August, camping on location. The site is situated on a small grassy patch of crown land on the northeastern shore. The area is unusually flat, is surrounded by a myriad of boulders, and probably did not support more than a half-dozen individuals at any time.

After surveying and mapping the site, two trenches of 1-metre squares were excavated at 10-centimetre levels. Diagnostic artifacts were individually plotted, and all soil was screened through 6-millimetre mesh. Material for radiocarbon dating and soil samples for flotation were also recovered. Moreover, a section of the lake bottom adjacent to the site was dredged and water screened.

The excavation profiles revealed a complex of hearths, fire-cracked rock concentrations, ash layers, pits, and miscellaneous subsoil discolourations. No evidence of structures was observed, and only two confirmed post moulds were identified. The artifact inventory suggests considerable activity over a relatively short period, sometime in the late fifteenth or early sixteenth century. Ceramics, pipe fragments, chipped lithics, ground stone, and worked bone is represented, and (with the exception of a few twentieth-century gun shell-casings) there is no evidence of European intrusion. A radiocarbon date is not yet available.

Most notable, however, is the predominance of faunal remains in the assemblage. Despite the notoriously acidic soils of the Canadian Shield, bone preservation is excellent. As table 1 illustrates, the 4643 elements represent over 84 per cent of the total recovered material at the site. This undoubtedly reflects the primary mode of subsistence of a small band of hunter-gatherers who exploited a wide variety of land and aquatic resources at a seasonal camp. Identification of these resources through faunal analysis is currently in progress. Preliminary archaeobotanical analysis has also led to the recovery of a single tobacco seed (*Nicotiana* sp.). This may be the first discovery of the genus on a non-Iroquoian site in eastern Ontario (von Gernet 1991).

Equally intriguing is the "Iroquoian" character of the diagnostic artifacts. Many of these specimens would not be out of place in a prehistoric Huron site several hundred kilometres to the west. There is little but the geographic location of the site to suggest that the assemblage might properly be associated with Algonkins. This raises a number of issues regarding the reflection of ethnicity in material culture, and/or the relations between Iroquoian- and Algonkian-speaking

TABLE 1
Highland Lake Site (BiGh-1): Frequencies and Percentages of Recovered Material

	Frequency	Per Cent
Faunal elements	4,643	84.1
Worked bone or antler	10	0.2
Ceramic vessel sherds	134	2.4
Ceramic pipe fragments	11	0.2
Ceramic wastage	1	—
Chipped lithic flakes and detritus	250	4.5
Scraper	1	—
Projectile points	3	0.1
Ground stone adze fragments	6	0.1
Charcoal	463	8.4
Total	**5,522**	**100.0**

people of Ontario. The problem is certainly not new, and has been ably discussed by a number of researchers working throughout the northeast (Brumbach 1975; Dawson 1979; Mitchell 1975; Wintemberg 1931). It is hoped that analysis of the material excavated in 1990, as well as the results of the 1991 field season, will contribute to a better understanding of these issues.

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UNDERWATER SURVEYS

HMS SPEEDY PROJECT: THE 1990 FIELDWORK

Kenneth A. Cassavoy

The decision to undertake the HMS *Speedy* Project in 1990 was based on the viewing of videotapes recorded by an underwater camera off Presqu'ile Point in Lake Ontario. Although the resolution on the videotapes was extremely low and many of the images indistinct, the initial viewing suggested the presence on the lake bottom of anchor and chain, cannon shot, a clay pipe, a pair of eyeglasses, and perhaps human skeletal remains. The owner of the remotely operated vehicle (ROV) that carried the underwater camera, Edward Burtt of Belleville, Ontario, believed that the material videotaped by his equipment was from the HMS *Speedy*.

The *Speedy*, a Provincial Marine vessel, disappeared while travelling up the lake from York (Toronto) to Presqu'ile (near Brighton) in October 1804. The videotape evidence suggested the presence of a shipwreck and, given the nature of some of that evidence, the possibility that this wreck could be the *Speedy* was not an unreasonable one. Further, given the established importance of the *Speedy*, it seemed necessary to take steps immediately to try to identify the wreck and to protect it while these identification efforts were underway. Thus, a season of survey work was carried out during the summer of 1990 and, in advance of that work, a different type of protection was developed to safeguard the site. This report deals with the survey activity, while a separate report in this publication (HMS *Speedy* Project: A New Approach to Site Protection) discusses the efforts to safeguard the site.

THE SPEEDY AND HER PASSENGERS

The HMS *Speedy* went into Provincial Marine service in the late summer of 1798.[1] Because no plans of the *Speedy* have been located and no known authentic sketch of the ship exists[2] (figure 1), her dimensions can only be estimated. However, enough is known about vessels of the period to suggest that the *Speedy* probably had a length of 60 to 70 feet, a beam of approximately 18 to 20 feet, and a hold depth of 8 or 9 feet. It is likely the vessel had a burthen of somewhere between 50 and 100 tons. As a Provincial Marine gunboat, the *Speedy* would have carried at least one gun, and perhaps two, most probably cannon of relatively small calibre. The vessel almost certainly would

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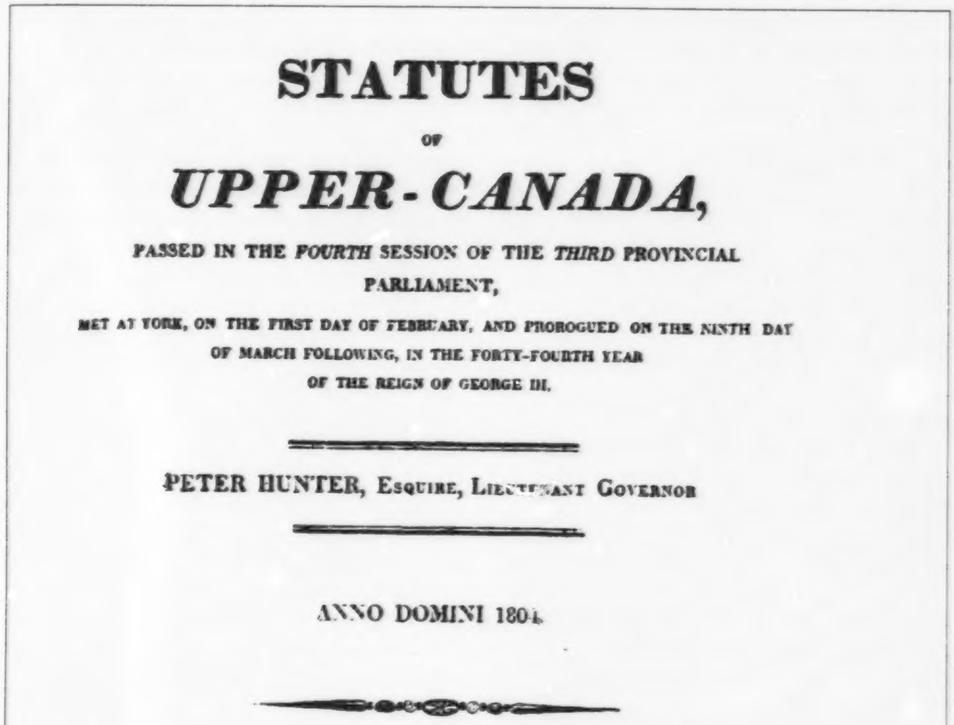
Trent University, Peterborough, Ontario, K9J 7B8
Underwater Survey Licence 90-067

Figure 1: HMS *Speedy*, pencil sketch by J.H.C. Snider c.1913, watercoloured by Owen Staples. John Ross Robertson Collection, Metropolitan Toronto Reference Library

have been rigged as a topsail schooner, the standard rig for many Provincial Marine vessels in that period. We know for certain that the *Speedy* underwent regular refittings[3] and, during her last trip of the 1801 season, suffered some damage that required repairs early in 1802.[4]

References to the *Speedy* in the records of the Provincial Marine indicate that the vessel carried out the usual duties of transporting goods, materials, and men to and from various points along Lake Ontario, notably Kingston, York, and Fort George, during the period 1798 to 1804.[5] However, on 7 October 1804 the *Speedy* was given a somewhat unusual assignment, which would take her from York, east up the lake, to Presqu'ile, the newly designated government seat for the District of Newcastle. On board the vessel that day was a group of passengers being transported to court proceedings at Presqu'ile, including the Chippewa, Ogetonicut, who was charged with murder. Among the notable citizens on board were Robert I.D. Gray, Upper Canada's first solicitor-general; Justice Thomas Cochrane, judge of the Court of King's Bench in Upper Canada; and Angus Macdonnell, member of the assembly of Upper Canada. In all, about twenty people, including five crew members, were on board the vessel.[6] As well as the people on board, we know the *Speedy* was also carrying six new copies of the provincial statutes, destined for the new district capital and for distribution to nearby centres (figure 2).[7]



STATUTES

OF

UPPER-CANADA,

PASSED IN THE *FOURTH* SESSION OF THE *THIRD* PROVINCIAL
PARLIAMENT,

MET AT YORK, ON THE FIRST DAY OF FEBRUARY, AND PROROGUED ON THE NINTH DAY
OF MARCH FOLLOWING, IN THE FORTY-FOURTH YEAR
OF THE REIGN OF GEORGE III.

PETER HUNTER, ESQUIRE, LIEUTENANT GOVERNOR

ANNO DOMINI 1804.

CHAP. I.

An Act for the better securing THIS PROVINCE against all SEDITIOUS ATTEMPTS or DESIGNS to disturb the TRANQUILITY thereof.

[*9th March*, 1804.]

WHEREAS it is necessary to protect His Majesty's Subjects of this Province from the Insidious Attempts or Designs of evil minded and seditious Persons ; And whereas much danger may arise to the Public Tranquility thereof, from the unrestrained resort and residence of such persons therein ; Be it therefore enacted by the King's Most Excellent Majesty, by and with the advice and consent of the Legislative Council and Assembly of the Province of Upper-Canada, constituted and assembled by virtue of, and under the authority of an Act passed in the Parliament of Great Britain, intituled, " An Act to repeal certain parts of an Act passed in the fourteenth year of His Majesty's Reign, intituled, ' An Act for making more effectual provision for the Government of the Province of Quebec in North America, and to make further provision for the Government of the said Province." Preamble.

S 2

Figure 2: From the Provincial Statutes of Upper Canada revised, corrected and republished by authority. York: R.C. Horne, 1818 [1819]. Archives of Ontario. Six copies of the statutes were on board the *Speedy* when she sank.

Towards evening on 8 October, the *Speedy* was seen east of Presqu'ile, but soon after the wind turned, a gale developed, and the vessel disappeared.[8] There is little question that the *Speedy* went down late that night or perhaps early the next morning, but we know nothing more now of the circumstances of the sinking than was reported at the time. About two weeks after the *Speedy* disappeared, a few small items from the vessel were washed ashore at the far end of the lake, but nothing further was ever seen or heard of the vessel or those on board.[9]

Unquestionably, the sinking of the *Speedy* and the death of her passengers had an enormous impact on the community in Upper Canada. Accounts of the sinking at the time and in subsequent years clearly indicate the event was considered to be a most serious blow to the struggling young province.[10]

1990 SURVEY

The initial objective of the 1990 HMS *Speedy* Project field season was to relocate the cultural material seen on the original videotape and, especially, to pinpoint the location of the clay pipe and eyeglasses as the central reference point for a wider survey. Based on the viewing of the original videotape, it appeared that the suspected debris field could range over a very long path, perhaps as much as a kilometre or more. Given the extensive area to be covered, remote-sensing and remotely operated camera devices were chosen as the primary tools to be used during at least the initial periods of the survey. These survey tools were operated from one primary project boat, with three secondary boats used in specific support roles. The vessels operated out of boat slips at Barcovan Beach, a few kilometres north of the site area.

The original project work schedule had called for intensive side-scan sonar survey work during the initial phase. The first project days were to involve drop video and ROV checks of specific locations, to be followed immediately by wide-ranging side-scan sonar sweeps of the entire project area. However, at the outset, the side-scan sonar was found to be malfunctioning, and lengthy delays were encountered in having repairs made by the manufacturer. As a result, the project team had to fall back immediately on more extensive use of the remotely operated video systems.

During the period 16 June to 12 September 1990, a total of seventeen days of survey work was carried out. Roughly 60 per cent of the work in this period involved a combination of drop video and ROV surveying, around 22 per cent was devoted to magnetometer work, approximately 10 per cent to diver investigations of specific bottom areas using Scuba, and the remaining 8 per cent of the time involved the positioning of the site protection buoys, some later follow-up adjustments to the buoys, and other miscellaneous survey activities. A further two days of survey work were carried out during the month of October, with both days devoted to the use of a new tow-bird video system.

Towards the end of the field season, with the side-scan sonar still inoperative, arrangements were made for the use of an alternative side-scan system. Because of commercial commitments on the part of the system owner, scheduled operational dates were bumped several times and, in the end, cancelled because of the lateness of the season.

SUMMARY

The results of the 1990 survey work on the HMS *Speedy* Project are inconclusive. Although a large area of lake bottom was surveyed, the cultural material seen in the original videotape was not relocated. At the same time, with one possible exception, no important new cultural material that could be definitely related to a shipwreck was positively identified. The possible exception involved the results of tow-bird surveys carried out at the end of the field season. Five target areas identified during the tow-bird surveys will be investigated at the outset of the 1991 field season.

In the author's view, the loss of side-scan sonar capability was the major factor in the inconclusive results of the 1990 project survey. Without side-scan information, it was impossible during the short field season to determine the presence of a ship's hull or of major sections of a hull over the many square kilometres of lake bottom making up the search area. Our inability to make such a determination clearly crippled our efforts to meet the project objectives.

Unquestionably, there is some cultural material located in the HMS *Speedy* Project survey area. The 1990 fieldwork did not provide any evidence that this material is from a shipwreck. At the same time, there is no new evidence that would alter the original considerations that brought about the project work. Given what can be seen on the original videotape, a shipwreck remains a possibility as the source of this material and, given the importance of the *Speedy*, efforts to relocate and identify this material should continue.

ACKNOWLEDGEMENTS

1990 HMS *Speedy* Project team: Ed Burtt, technical director; Terry Coons, chief diver; Gary MacDonald, captain of the *Glen Rover*.

The author gratefully acknowledges the assistance of The Ontario Heritage Foundation and the Ministry of Culture and Communications in supporting and funding work on this project. In particular, special thanks are extended to Phillip Wright, Peter Englebert, and Elizabeth McLuhan of the MCC and Robert Bothwell of the OHF. For research and logistical support, the author expresses thanks to Tom Kemp of Peterborough, Brendan O'Brien of Toronto, Nancy Creelman of Trent University, Jane Law of the University of Waterloo, and Brian Peck of Presqu'ile Provincial Park.

NOTES

1 E.A. Cruikshank, ed., *Correspondence of Peter Russell* (1935), vol. 1, 79

2 The drawing of the *Speedy* in the John Ross Robertson Collection (photo H1) in the Metropolitan Toronto Reference Library was drawn around 1913 by C.H.J. Snider and no source is given for the representation shown. Presumably it was based on established information on ships of the period.

3 National Archives of Canada, RG 8, C Series, vol. 724, p. 48, 12 April 1799, and vol. 724, p. 109, 12 Feb. 1800. Estimates of workmanship and materials required for the outfit of the *Speedy* for the ensuing seasons of 1799 and 1800.

4 Ibid., vol. 725, pp. 111 and 117, 8 Aug. and 12 Dec. 1801; *Speedy* has received some damage, and estimates of materials and workmanship required to repair her.

5 Ibid., vol. 724, p. 85, 8 Aug. 1799: Major H. Spencer to Major James Green, *Speedy* sailing for Fort George; vol. 1203 1/2 S., p. 11: re transport of troops; vol. 107, p. 193, 8 Aug. 1801: provisions sent on the *Speedy*, vol. 547, p. 87, 1 Oct. 1803: Col. E. Brock to Major S. Green, *Speedy* delayed waiting for passenger from Fort George to York.

6 *Upper Canada Gazette*, 3 Nov. 1804

7 Bureau of Archives for the Province of Ontario, *8th Report*, 1911, 28

8 *Upper Canada Gazette*, 3 Nov. 1804

9 National Archives of Canada, British Army Records, B-4284 3, p. 176, 25 Oct. 1804

10 Milo M. Quaife, *The John Askin Papers, 1796–1820* (Detroit 1931), vol. 2, 441–2; *Kingston Gazette*, 18 June 1811

MINISTRY OF CULTURE AND COMMUNICATIONS: MARINE HERITAGE CONSERVATION ACTIVITIES

Peter Engelbert

During the summer of 1990 staff of the Marine Heritage Conservation Programme examined two shipwrecks in the Great Lakes. One is the schooner *Annie Falconer*, which lies in Lake Ontario about 40 kilometres southwest of Kingston, off Long Point. She is in approximately 25 metres of water between False Duck and Timber Islands. The other wreck examined is that of the steamer *Acadia*, which ran aground on the eastern shore of Lake Superior about 170 kilometres north of Sault Ste Marie in what is now Lake Superior Provincial Park.

THE SCHOONER ANNIE FALCONER

The *Annie Falconer* (AlGe-1) is a two-masted, schooner-rigged vessel launched at Kingston, Ontario, on 22 May 1867. She had a registered length of 110 feet, a beam of 24 feet 6 inches, and a depth of hold of 9 feet. "On Saturday, November 12, 1904, the *Annie Falconer* left Big Sodus at 9 o'clock loaded with coal for Picton. The wind started picking up and when ten miles off False Duck Island the vessel started to leak. The captain tried to beach it on Timber Island but at about 2 o'clock in the afternoon she went down. The crew escaped in the yawl boat and were blown to the shore of Amherst Island where they landed at 7:30 in the evening. Shell Sullivan, the mate, got separated from the rest and died from exposure. The others made their way to a farm house and survived" (Neilson 1983).

The *Falconer* remained undisturbed until August 1975, when she was relocated by a group of divers who had been searching for her for some time. They removed a few artifacts and placed them in a small local museum. In 1982 a local dive charter-boat operator also found her and planned to begin taking dive charters to the site. He agreed to delay his plans for a year to allow Preserve Our Wrecks (POW), Kingston, a local marine heritage organization, to conduct a site survey to document the conditions on the wreck.

During June and July 1982, divers from POW under the direction of the author and P.J. Wright began preparing a site plan and general survey of the wreck. During that time it was noted that the bow of the vessel was losing its structural

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integrity and the starboard side was separating from the stem post (Engelbert and Morden 1983). This deterioration was further documented by divers from Save Ontario Shipwrecks (SOS), Quinte Chapter, who resumed work on the site in 1983 (Harvey 1984).

Early in 1990 it was reported that the deterioration of the *Annie Falconer* had worsened to the point where the bowsprit had fallen into the gap between the stem post and the starboard side. Plans were made to visit the site with a group of divers from POW to investigate this report.

On 21 June 1990 the author and a group of divers from POW visited the site. It was found that the reports were in fact true and that the entire starboard side of the vessel, from the midpoint of the stem up to the cap rail, was separating from the rest of the wreck and falling outward. Photographs and measurements were taken as a baseline for assessing the damage. The site was also surveyed to locate individual artifacts recorded during previous fieldwork and to determine if they were still on the wreck after almost seven years of intensive dive charter use.

Divers from the POW group continue to monitor the separation of the vessel's structure and have taken a series of measurements at points along the hull that will allow the deterioration process to be quantified over an extended period of time (Mullings 1990).

THE STEAM PROPELLER ACADIA

In July 1990, almost a century after her loss, the steam propeller *Acadia* was relocated by the author on the east shore of Lake Superior during the course of an underwater cultural resource inventory. The wreck lies within the boundaries of Lake Superior Provincial Park.

Built at Hamilton, Ontario, and launched on 1 May 1867, the *Acadia* is believed to have been the first composite vessel built in North America (C. Patrick Labadie, personal communication). Composite building utilizes iron framing with wooden hull planking. This technique was established practice in Great Britain in the mid-1800s and it was from there that the builders imported her engine frame and seat, her shafts, and all of the iron used to frame her (*Hamilton Spectator*, 1 May 1867). The builders, who were also her original owners, had *Acadia*'s boiler and engine built in Hamilton by F.G. Beckett and Co. (*Hamilton Spectator*, 2 May 1867). The *Acadia* was lost when she was driven ashore in a storm on 6 November 1896 (Canada, Parliament, Sessional Papers, No. 11, Department of Marine and Fisheries — Marine Branch, Anno 1898, p. 90).

Owing to the weather and to equipment breakdowns, no diving was done on the wreck site during the 1990 field season. However, photographs were taken and sketches were made of that portion of the wreckage that is on shore adjacent to the submerged portion of the site. Dives are planned with the Sault Ste Marie Chapter of Save Ontario Shipwrecks during the 1991 field season.

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ACTIVITIES ON THE SLIGO PROJECT

Tutty Lee

During the early fall of 1990, an underwater survey was carried out on a shipwreck site in Humber Bay, Lake Ontario. The wreck is the remains of the schooner-barge *Sligo*, built in 1860 at St Catharines. Originally named the *Prince of Wales*, this ship spent fifty-eight years working on the Great Lakes. It also made several trips across the Atlantic Ocean to England. The length of service proves the quality workmanship that went into this vessel at the shipyard of master shipbuilder Louis Shickluna.

The ship foundered during a fierce gale on 5 September 1918, while it was being towed to Hamilton carrying a heavy load of limestone. The location of the *Sligo* has been known to the dive community for a number of years and, consequently, the wreck has suffered some vandalism. Some tools and the personal belongings of the crew have also been removed by irresponsible divers. The purpose of our project is to identify and catalogue the remaining artifacts, inspect reported damage to the stern of the vessel, and produce an underwater video to be used as future reference.

The site is situated 1 1/4 nautical miles southeast of the mouth of the Humber River. Depth of the water is 20 metres, with visibility in this part of Lake Ontario ranging from 0.9–3.5 metres. Best visibility occurs during the early part of the year before spring runoff. Because the site is so close to the mouth of the river, even the smallest amount of precipitation increases the silt in the water and causes it to "cloud over." The murky water flowing from the river merges with the natural easterly flow of the lake and passes directly over the site.

Our survey showed the hull to be moderately intact, with the bow section the most complete. The stern appears to have been damaged at the time of sinking. A wooden stock anchor, windlass, donkey engine, and lengths of chain are among the major artifacts observed on the heavily silted deck. The site has also been littered with modern refuse placed here by divers who believe they are adding something to the site. This intermingling has caused us a lot of confusion and has damaged the chance to gain an accurate archaeological record of the site.

A series of orientation dives were conducted, during which a number of

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preliminary measurements were obtained of the hull. A rough-sketch drawing was completed of the entire wreckage field. Underwater still photography proved to be disappointing because of the high sediment content of the water and poor lighting conditions. We had more success with our video which, fortunately, just happened to be shot during a time of increased visibility. This temporary improvement in visibility was unexpected, since the project began so late in the field season.

The most recent video was compared with one obtained in 1987. Large artifacts are noted in both videos, but a number of smaller artifacts seem to be absent. We hope they have been relocated somewhere on the site.

We will continue to study this area during upcoming field seasons to complete our survey. The data collected will be used to produce an underwater field guide that will enhance public knowledge of this valuable archaeological and heritage resource.

RIDEAU CANAL UNDERWATER SURVEY

Ken McLeod

Many years ago I was involved in a personal research project collecting shipwreck information from old copies of Kingston newspapers (*Chronicle, News, Whig, Whig-Standard*). On rare occasions I would stumble across references to prehistoric sites throughout Ontario. I collected all of those descriptions and forwarded them to the regional archaeologist in the Eastern Region (Phillip Wright at the time). He, in turn, redirected each reference to the specific region mentioned in the article. I was delighted to hear that some of these references turned out to be genuine and were undisturbed sites (for example, the site near present-day Dundurn Castle in Hamilton).

More recently, while doing background archival research for the shipwreck *Kitty Friel*, I discovered a few more "sites." To my knowledge, these have yet to be verified or tested. One is an ancient prehistoric causeway in eastern Ontario near Charleston Lake. Another is a pictograph near Brockville, and a third is a cave site just outside Brockville. I found this information while reading the *History of Leeds and Grenville Counties* by Thad Leavitt (1879). A lead to a fourth site was discovered during my work on the *Kitty Friel*.

The *Kitty Friel* lies just north of the spillway at Edmonds Lock (Rideau Canal system) near Smiths Falls, Ontario. The vessel burned to the waterline and sank in August 1879. There was no loss of life. Subsequent research at the National Archives of Canada produced a stunning account of the accident in the shipping registers. The loss was a blow to owner John Neville and his son, Captain William Neville, master of the steam barge. After some determined genealogical research I located a descendant of Captain Neville, his ninety-two-year-old daughter-in-law, Loretta Neville. Still spry, she invited me to her home to show old photos of the captain; she also produced a scrapbook and pointed out her own daughter and son-in-law (Mr and Mrs André Grignon) of Ottawa, who have been assisting me with the Neville family research. Their nephew, a diver, knew nothing of the shipping history of the Neville family!

Despite its shallow depth, the *Kitty Friel* has proved to be an enigma, not only for myself but for divers of the Underwater Society of Ottawa who first

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visited her in 1967. The divers complained of poor visibility and of difficulty in locating the wreck. Twenty-four years later, things haven't changed. After one dive in which my partner Dave Ostifichuck and I definitely located her keelson, the *Kitty Friel* hex struck: darkness fell and we could not relocate the wreck. Four subsequent dives also failed to relocate the *Kitty Friel*.

Paul Watkins, whose land is adjacent to the wreck site, informed me that when the foundation was being dug for their house, many Indian arrowheads were turned up. A subsequent search of known prehistoric sites confirms that the "site" on Watkins property, if indeed it is one, has not previously been recorded.

Never a dull moment in this business — shipwrecks that go into hiding, prehistory beneath my feet, ancient Indian causeways, pictographs by the St Lawrence — and I with only one lifetime. Stay tuned.

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GRANTS

HMS SPEEDY PROJECT: A NEW APPROACH TO SITE PROTECTION

Kenneth A. Cassavoy

In 1990 an underwater survey was conducted of suspected shipwreck material in Lake Ontario off Presqu'ile Point. The finder of the material, Edward Burtt of Belleville, Ontario, believed the material to be from the wreck of the HMS *Speedy*, which sank while transporting a number of prominent citizens from York to Presqu'ile in October 1804.

Concurrent with arrangements to obtain an archaeological licence to investigate the wreck, a considerable amount of work was directed towards developing special protective measures for the suspected shipwreck material. Given the established importance of the *Speedy* in terms of Ontario's history, the Ministry of Culture and Communications was asked to provide assistance in the development of these protective measures, at least until the suspected shipwreck material could be fully identified.

This report deals with the site protection efforts undertaken by the HMS *Speedy* Project team. A separate report in this publication (see HMS *Speedy* Project: The 1990 Fieldwork) deals with the background of the *Speedy* and the 1990 survey activities.

SITE PROTECTION AGREEMENTS

With the potential importance of this underwater site established, representatives of the Minister of Culture and Communications agreed to meet with members of the HMS *Speedy* Project to discuss site protection proposals. At that meeting, in January 1990, project team members put forward a series of proposals that would utilize the protection afforded by the Ontario Heritage Act but would also take protection a few necessary steps further. Specifically, proposals were made concerning electronic monitoring of the site area (figure 1), arrangements for visual monitoring by Presqu'ile Provincial Park staff and area residents, and procedures to be followed if site intrusion or site disturbance took place. In general, ministry staff supported our proposals and initiated steps for a second meeting that would be broadened to include a number of other interested and involved parties.

In April 1990 a meeting was convened at Presqu'ile Provincial Park that included various representatives from The Ontario Heritage Foundation, the

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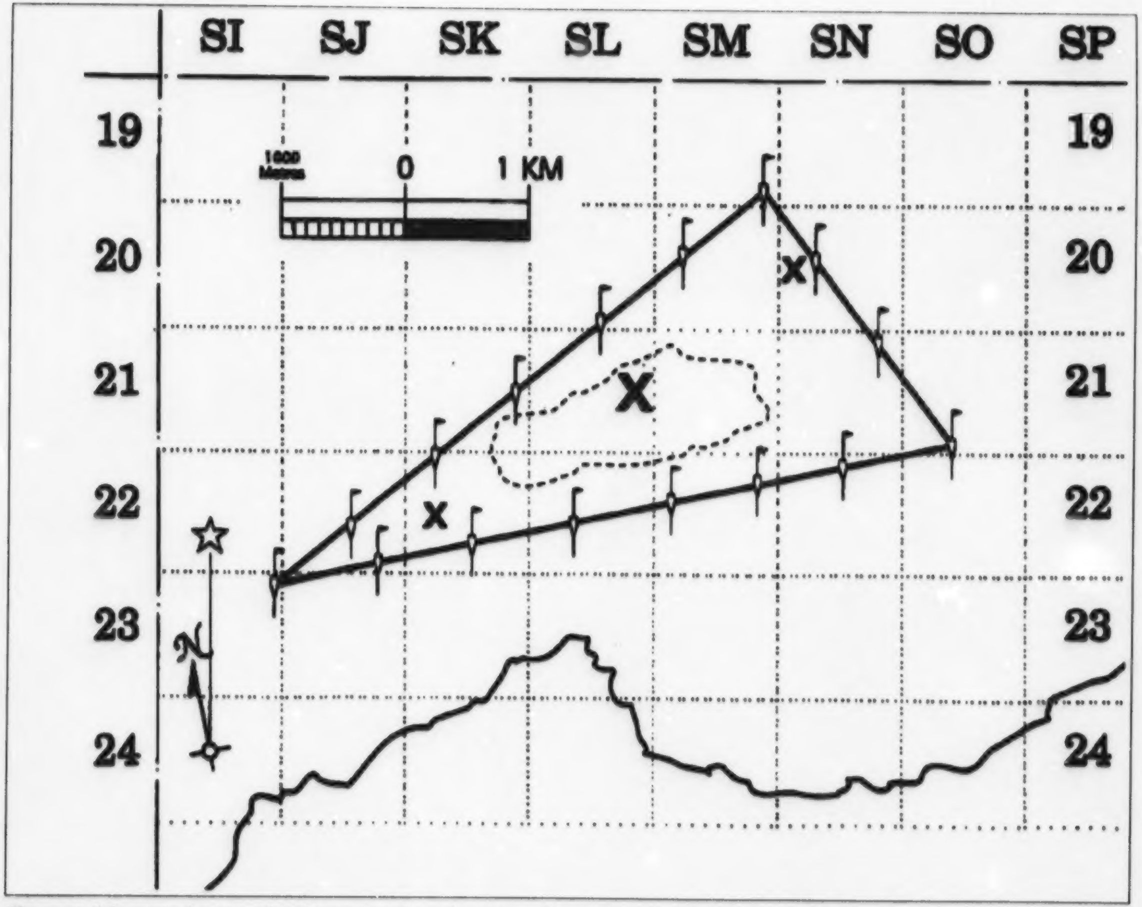
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Figure 1: Schematic diagram of grid system and configuration of boating restriction buoys around a protected site area. The buoys are placed at intervals of approximately 570–1000 metres. The symbol X indicates locations of shipwreck debris.

Ministry of Culture and Communications, the Ministry of Natural Resources, the Ontario Provincial Police, the Canadian Coast Guard, and the HMS *Speedy* Project. A plan was developed that all agreed would provide the best possible protection for the site. In developing this plan it was first necessary to reach a general consensus on the following basic principles:

1 Ownership of the site, for purposes of protection, was deemed to be in the hands of the Province of Ontario. While ownership of shipwreck remains lying under bodies of water are often a matter of disagreement between federal and provincial authorities, those present were confident that, in the interest of protecting the site, the federal jurisdiction, in this specific situation, would not challenge a claim of provincial ownership.

2 Assuming the provincial ownership of the site not to be in dispute, any material removed from the site could be considered stolen property. The Ontario Provincial Police position on this was clear: once the ownership of the material was established, or a creditable claim of such ownership was understood, the OPP were in a position to protect the material from theft. In the past, with the ownership of site material not clearly established, police officers, understandably, have been reluctant to enter into what could become a lengthy, tangled legal process, by invoking the rarely used and much less clearly understood Ontario Heritage Act.

3 Again, with provincial ownership of the site not in dispute, the Ministry of Natural Resources indicated that the designated lake bottom area on which the wreck debris was believed to lie could be considered as part of Presqu'ile Provincial Park and thus the lake area over the site could be "posted"; that is, when properly signed, public access could be restricted and those not observing the restrictions could be charged with trespass.

In summary, with the above points established, the site now had two levels of protection. On one level, a simple charge of trespassing could be laid against anyone not properly observing restrictions over the site area. The trespassing aspect could be enforced by either provincial park personnel or the Ontario Provincial Police. On a second level, the site itself would now be protected not only by the Ontario Heritage Act but also by simple criminal considerations related to theft. Based on understandings reached at the Presqu'ile meeting, any removal of material from the project site could be considered as theft from the Province of Ontario and handled in a routine manner by police. This approach provided the basis for a quick and simple response by the OPP to any threat to the site, while leaving open the option of adding other possible charges later under the Ontario Heritage Act.

SITE PROTECTION ARRANGEMENTS

With the above critical points agreed on, the ad hoc Presqu'ile committee moved on to technical and logistical aspects of protection for the HMS *Speedy* Project site area. Based on those discussions, a series of specific protective measures were agreed upon and implemented over the course of the following weeks.

The site area to be posted was defined and agreed upon. A decision on this point was reached after discussions

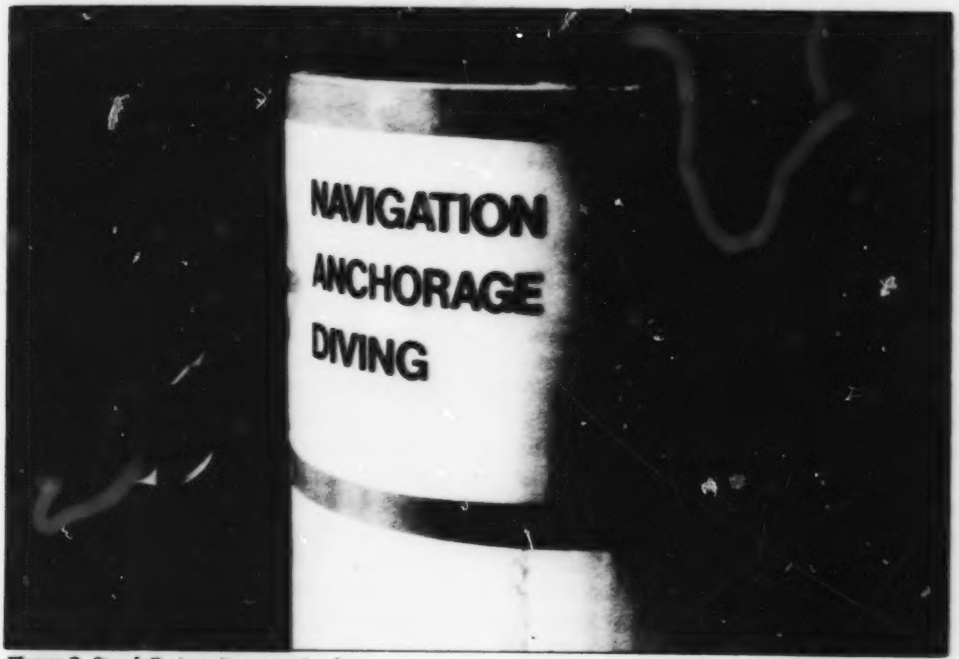

Figure 2: *Speedy* Project site protection buoy

between the Ministry of Natural Resources and the *Speedy* Project group. Ultimately, a triangular section of the lake bottom off Presqu'ile Point constituted the officially designated site area.

With the assistance of the Canadian Coast Guard, a series of boating restriction buoys were purchased and signed appropriately, then put in place around the designated area by the project team (see figure 2). The specific wording of the signage was

NAVIGATION PROHIBITED
ANCHORING PROHIBITED
DIVING PROHIBITED
Pursuant to SEC.26 – *Ontario Public Lands Act*

Ultimately, to avoid a lengthy delay involving procedural considerations on the part of Transport Canada, the buoys were put in place with the lettering "Navigation Prohibited" and reference to the *Ontario Public Lands Act* covered from view.

Site monitoring arrangements were made and procedures established for identifying any vessels entering the restricted area and for communication between monitors and OPP and/or Presqu'ile Park personnel. Finally, response procedures were put in place that would come into effect if site monitors notified Ontario Provincial Police and/or Presqu'ile Provincial Park officers of an intrusion into the site area.

As part of the efforts to inform the public about site protection measures, a news conference was held in Toronto and was attended by most of the major local and national media. As a result, the site and the protective arrangements received relatively wide coverage.

SUMMARY

Based on the experience through the 1990 field season, it would seem the site protection arrangements were effective. Certainly, during the course of the extensive survey work, the project team did not see any attempt to intrude into the survey area, either in terms of scuba or surface activities. As well, to the best of the author's knowledge, those monitoring the site recorded no incidents of divers or dive boats in the protected area. In our experience, this is a most unusual situation and speaks to the effectiveness of the arrangements for protecting the site and the efforts to make those arrangements known to the general public. We were further encouraged in our site-protection efforts to learn that the approach and procedures put in place for the *Speedy* project are now considered something of a model for protecting other sites in the province. In fact, work on the *Speedy* project was used as a precedent in the recent protection of the Lake Erie shipwreck, the *Atlantic*, from American looters (Peter Engelbert, personal communication). In the initial meeting with the Ministry of Culture and Communications we expressed our hope that site protection efforts would become a model for future projects.

ACKNOWLEDGEMENTS

1990 HMS *Speedy* Project team: Ed Burtt, technical director; Terry Coons, chief diver; Gary MacDonald, captain of the *Glen Rover*.

The author gratefully acknowledges the assistance of a number of individuals and agencies who worked with the project team in providing support for our efforts to protect this site. Specifically, we would like to thank Terry Eccles, Phil Smith, and Brian Peck of the Ministry of Natural Resources; Staff Sergeant Ron Le Clair of the Ontario Provincial Police; Roy Landon of the Canadian Coast Guard; Robert Bothwell of The Ontario Heritage Foundation; and Phillip Wright, Peter Engelbert, and Elizabeth McLuhan of the Ministry of Culture and Communications.

PALEOETHNOBOTANICAL STUDIES OF MATERIAL FROM THE WALLACE SITE, A TERMINAL WOODLAND PERIOD IROQUOIAN COMMUNITY IN ONTARIO

John B. Letts

The systematic recovery of charred plant remains by water flotation was a principal objective of the University of Toronto's 1984–5 excavations of the Wallace site (AkGx-1), an early sixteenth-century Iroquoian village on the Niagara Escarpment northwest of Toronto. Data on plant use was expected to deepen understanding of the subsistence and dietary adaptations of late Terminal Woodland period Ontario Iroquois communities living at the northern edge of the Carolinian Biotic Province.

The bulk of the samples recovered were examined by Dr Gary Crawford at Erindale College, Mississauga (Crawford 1986). The author's MSc thesis (Letts 1990) augments Crawford's analysis; a dozen rich samples were examined at the Institute of Archaeology (London) under the supervision of Gordon Hillman. Concurrent with this analysis, a review was undertaken of documentary sources dealing with the use of plants by Native peoples in the Great Lakes region during the early contact period.

Plant remains were recovered by flotation using 0.4/1.6-millimetre screens to collect light/heavy fractions. In the laboratory, samples were separated into standard size-fractions using nested geological sieves. Approximately half (by weight) of the charred material examined was retained on a 2.0 millimetre sieve and sorted into component categories, while the smaller size-fractions were scanned for non-maize seeds.

An assortment of taxa commonly found on Iroquoian sites in Ontario was recovered from the Wallace site. Kernels and cupular tissue of Eastern Complex 8-row flint maize (*Zea mays* L.) dominate all samples. Two principal types of charred maize fragments are present in a 2:1 ratio: a fine vescicular form and a coarser type. The fine vescicular fragments preserved more of their diagnostic pericarp (seed coat), and the coarser fragments were much more fragmented. Very few non-maize cultigens were recovered, although seeds of squash/ pumpkin (*Cucurbita pepo* (L.) Decker), bean (*Phaseolus vulgaris* L.), and sun-flower (*Helianthus annua* L.) are present. Seeds of tobacco (*Nicotiana rustica* L.) were identified only in the samples examined in London.

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In addition to small quantities of nutshell of butternut (*Juglans cinerea* L.), beech (*Fagus grandiflora* L.), and hickory (*Carya* sp.), the Wallace samples were rich in seeds of summer fruit such as strawberry (*Fragaria* sp.) and raspberry/blackberry (*Rubus* sp.). One sample produced a large fragment of strawberry — probably a result of the fruit having been partially preserved by drying prior to charring. Seeds of elderberry (*Sambucus canadensis* L.) and of black nightshade (*Solanum nigrum* L.) were also present, although no charred cherry or native plum stones (*Prunus* sp.) were encountered in the London samples. All of the samples contained charred grass (Gramineae) and cattail (*Typha* sp.) seed, while white grape (*Vitis* sp.), spikenard (*Aralia racemosa* l.), and possibly wild rice (*Zizania aquatica* L.) were identified in samples examined in Toronto.

Approximately 75 per cent (by weight) of the sorted material was composed of wood and bark tissue, 21 per cent of maize kernel and cupular tissue, and a further 0.5 per cent of nutshell. Significant deviations existed between samples, and ratios were calculated in order to reveal patterns that may reflect food processing or disposal events.

Documentary sources provide much useful information concerning late Terminal Woodland period Iroquoian subsistence and use of plants in the region. With respect to cultigens, Heidenreich (1971) suggested that a "flour" and a "flint" variety of maize were cultivated in seventeenth-century Ontario. The documentary evidence relating to Huron food preparation techniques supports Heidenreich's interpretation; a long-seasoned "floury" variety may have been eaten green or boiled as whole ripe kernels, while a shorter-seasoned "flinty" variety was preferred for grinding into flour. The archaeobotanical data, however, suggests that these varieties were not morphologically distinctive and are included within the Eastern Complex 8-row flint race. It is suggested that the ratio of the two types of maize fragments observed in the charred remains from the Wallace site reflects culinary practices relating to this varietal separation.

The data suggests that late Terminal Woodland period Iroquoians gathered larger quantities of wild plant foods than has been thought — particularly summer fruit and nuts (Monkton 1990). Although maize was an undisputed staple, "sagamite" would rarely have been the uniform and insipid dish described by the early French chroniclers.

A careful reading of the literature also indicates that European notions of "agriculture" may have circumscribed early descriptions of Huron horticulture; "garden plots" containing a diversity of crops and semi-domesticates including squash/pumpkin, sunflower, beans, jerusalem artichokes (*Helianthus tuberosus* L.), and tree and bush fruit may have been maintained near villages and in abandoned maize fields.

Although the growing season on the heights of the Niagara Escarpment may have been significantly shorter than elsewhere in the region, maize was certainly cultivated successfully in the vicinity of the Wallace site. The paucity of non-maize cultigen remains in the samples suggests that the inhabitants of the site may have exploited a specialized niche in the environmental and social milieu of sixteenth-century Ontario: fruit resources were plentiful; the village was well situated to take advantage of spring and autumn bird migrations; the nut-mast and deer hunting grounds of central Ontario swampland in the vicinity of the site would have provided ample resources of semi-aquatic plants and animals; and the local network of interconnecting streams and rivers provided access to the extensive aboriginal trade network.

It is possible that the sixteenth-century Iroquoian groups that inhabited southern-tier villages such as the Wallace site were less dependent on agriculture than later Neutral or Huron populations. Escarpment-oriented groups such as the Wallace community moved north towards Huronia and Petunia in the mid to later part of the sixteenth century and adopted an increasingly maize-focused trading economy as the nexus of the interior trade network shifted towards its early historic period disposition.

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DATING THE WOODLAND OCCUPATIONS OF SAND ISLAND, LOWER RIDEAU LAKE, LEEDS COUNTY, ONTARIO

Gordon D. Watson

The introduction of accelerator mass spectrometry (AMS) permits the dating of milligram-size charcoal samples. The procedure allows charred food deposits on sherds or vessels to be dated. Since the charred food deposits formed while the vessel was in use, the usual uncertainty concerning the strength of the association between the artifacts and the dated material (such as charcoal from a nearby hearth) can be eliminated. Furthermore, the method provides a precision of about ± 30 years for dates on material from the Woodland period, providing a resolution of about one generation in dating changes in the material culture of this time period. This project using the AMS dating technique was undertaken to establish the ages of a series of pottery types from the multicomponent Driscoll site (BfGa-24) on Sand Island in the Lower Rideau Lake.

Sand Island is located at the northeastern end of the Lower Rideau Lake at the point where the lake flows into the Rideau River (Watson 1990b, figure 4:13). The island is 3.8 kilometres northeast of Rideau Ferry and 6.5 kilometres southwest of Smiths Falls, Ontario. Surface collection had been undertaken at Sand Island for many years prior to the author's work and it was knowledge of these collections in the Perth Museum (Watson 1982b) and the Royal Ontario Museum (Watson 1976a) that prompted us to include the island in our 1975 and 1976 surveys (Watson 1976b, 1977). The excavation of the Driscoll site on Sand Island was undertaken in 1981 and 1982 (Watson 1982a, 1983).

The separation of different cultural layers by examination of mean depths-of-recovery by statistical methods was achieved at the Wyght site (Watson 1980). The depth structure at the Driscoll site also makes it possible to separate cultural levels by statistical methods (Watson 1983, 1987).

DRISCOLL SITE RADIOCARBON DATES

In 1990, eight new radiocarbon dates from the Driscoll site were obtained with the support of a grant from The Ontario Heritage Foundation. The four dates on charred food deposits are listed, with the word encrusted italicized, in table 1, along with another date from the Constance Bay site (BiGa-2) (Watson 1972), which has

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similar pseudo-scallop-shell ceramics of about the same age.

A regression analysis indicates that there is strong correlation (.91) between depth and calibrated radiocarbon age at the Driscoll site (Watson 1990c). The equation representing this relationship can be used to estimate the approximate age of any object on the basis of its depth-of-recovery (Watson 1980, 1983, 1987, 1990a). The 1982 work established that statistical methods would permit the determination, with about 3 per cent probability of being wrong, of the relative temporal order of identifiable pottery vessels, if their mean depths differed by 1 centimetre (Watson 1983, 11–14).

The relationship between depth-of-recovery and age of charcoal (or in four cases, the charred food deposits on pottery rims) is a clear indication that, although no stratigraphy can be observed, the deposits nevertheless provide a record of superimposed occupations, in spite of their relatively shallow depth and some inevitable mixing (figure 1).

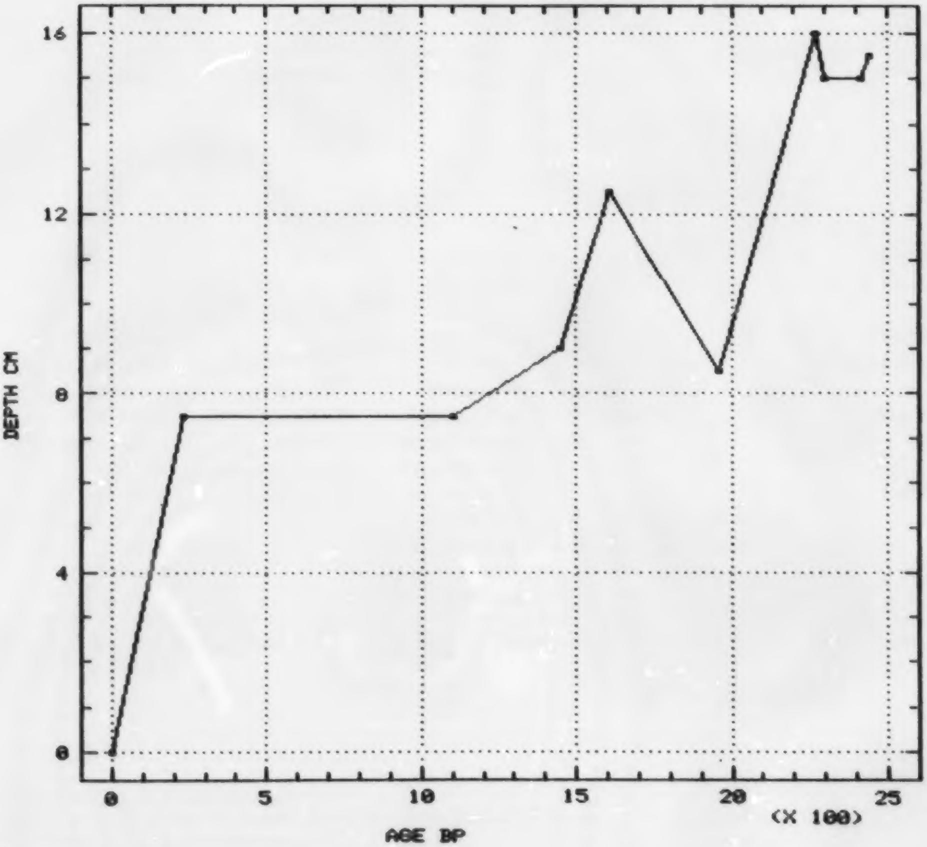

Figure 1: C14 calibrated age vs depth (in centimetres)

TABLE 1
Driscoll Site (BfGa-24) Radiocarbon Dates

Catalogue Number	Horizontal Provenance	Charcoal Depth (cm)	Associated Artifact	Artifact Mean or Actual Depth (cm)	Age BP & Date (1910 calibrated)
BfGa-24 40-124-202	Whole sq.	5–10	Trailed criss-cross rims and body sherds (Watson 1983, figure 2d)	7.5	230±50 BP (294 calibrated) TO-1806
BfGa-24 40-115		5–10	Charcoal sample	7.5	1100±210 BP (1035 calibrated)
BfGa-24 43-119-9	E51 N59	9	*Encrusted* cord-wrapped-stick interior punctate rim	9 actual 8.3 mean	1450±30 BP (1319 calibrated) TO-1805
BfGa-24	Hearth pit	10–15	Charcoal from hearth fea. 1	12.5 mean floor level at 10 cm	1610±175 BP (1524 calibrated) S-2145
AD					
BC					
BfGa-24 40-115-76	E25 N25	5–12	*Encrusted* coarse dentate rim	8.5	1960±40 BP (1910 calibrated) TO-1804
BfGa-24 66-112-2	E48 N10	16	*Encrusted* PSS vertical rim and oblique neck	16 actual	2270±40 BP (2336 calibrated) TO-1807
BfGa-24 53-100-42	E18 N53	28 pit	*Encrusted* PSS oblique rim and horizontal neck	28 actual floor level approx. 15 cm	2300±40 BP (2342 calibrated) TO-1808
BiGa-2	T1/2 E Hearth pit	15–30	Criss-cross rim PSS horiz. neck PSS vertical and PSS rocker stamp body (Watson 1972)	15 floor level	2440±75 BP (2467 calibrated) S-578

Calibration of the radiocarbon age was determined using the University of Washington program for MS-DOS computers (Stuiver and Reimer 1986).

CERAMIC TEMPORAL SEQUENCE

The four radiocarbon dates obtained from encrusted sherds at the Driscoll site provide a relatively firm temporal sequence. The dates do not provide any significant surprises. For example, the pseudo scallop-shell rims from the Driscoll site correspond in age with the pseudo scallop-shell vessel from Constance Bay dated by association with hearth charcoal at 2440±75 BP (490 BC± 75) (S-578) (Watson 1972, 1986). Moreover, the narrow, out-flaring lips on these sherds/vessel are considered to be a relatively old ceramic trait in Ontario (J.V. Wright, personal communication 1990). Also, the date of AD 44±40 on the coarse dentate sherd from the Driscoll site (40-115-76) compares in age to Saugeen pottery reported by Finlayson (1977). Finally, the cord- or fabric-impressed vessel with interior punctates and exterior bosses from the Driscoll site would be expected to occur in the AD 250 to AD 750 period. The above-mentioned dates on charred food deposits do, however, provide much more precise dates for these pottery types and, therefore, significantly refine the understanding of the ceramic sequence in the Rideau Lakes area (figure 2).

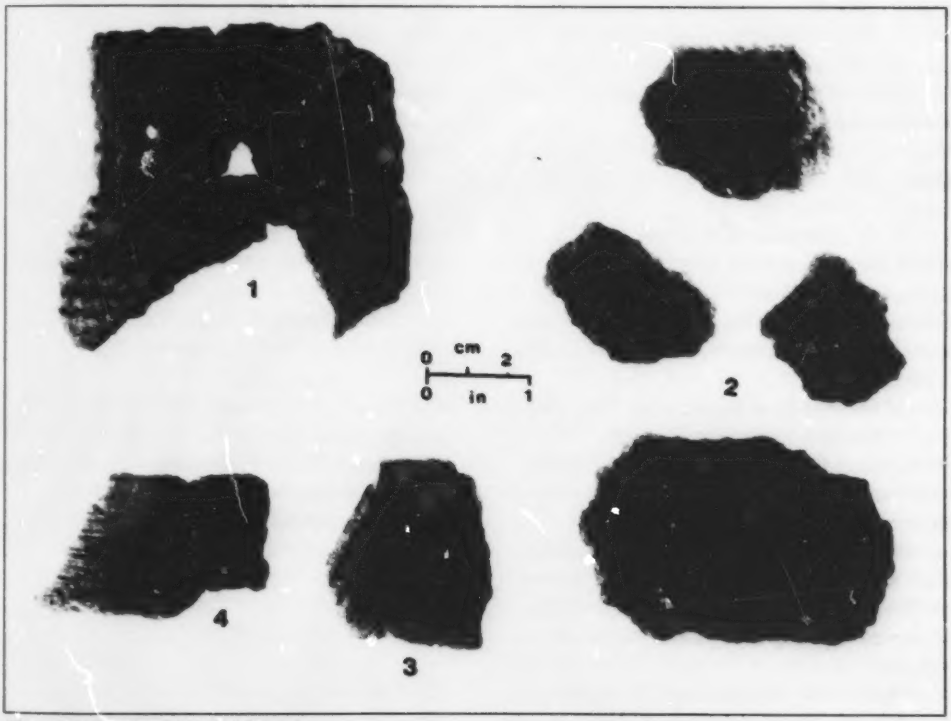

Figure 2: Sherds with dated deposits
1 fabric- or cord-impressed rim with interior punctates and exterior bosses
2 pseudo-scallop shell impressed rim
3 pseudo-scallop shell impressed rim
4 rim and body sherds with coarse dentate and trailed stylus decoration

It is hoped that other researchers will submit charred food deposits for dating of pottery sherds. Eventually, with a sufficient number of dates, it will be possible to define the temporal range of different pottery attributes or types.

ACKNOWLEDGEMENTS

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Name	Company	Licence Type	Location	Number
CONSERVATION				
Broadbent, Heather		Conservation — Surface Collecting Only	Town of Caledon	90-074 (inactive)
Bruchert, Lorenz W.		Conservation	R.M. of Haldimand-Norfolk	90-048 (inactive)
Cooke, Philip C.		Conservation — Surface Collecting Only	Sunnidale/Flos Twp, Simcoe County	90-113
Croft, David		Conservation — Surface Collecting Only	Renfrew County	90-035
Daechsel, Hugh	Cataraqui Archaeological Res Fnd	Conservation	Province of Ontario	90-054 (inactive)
Dibb, Gordon		Conservation	Southcentral Ontario	90-064
Dormer, Dave		Conservation — Surface Collecting Only	Northwestern Ontario	90-038
Doroszenko, Dena	Ontario Heritage Foundation	Conservation	Ontario Heritage Foundation Propty	90-083
Fox, William	Development Plans Review, MCC	Conservation	Bruce, Grey & Dufferin Counties	90-101
Hamilton, Scott	Lakehead University	Conservation	Northwestern Ontario	90-093
Garrad, Charles		Conservation — Surface Collecting Only	Grey, Dufferin & Simcoe Counties	90-023 (inactive)
Gliddon, Allyne		Field Survey & Conservation	Northern Ontario	90-075
Howey, Arthur		Conservation — Surface Collecting Only	Ancaster, Brantford, S. Dumfries	90-047
Kapches, Mima	Royal Ontario Museum New World Arch	Conservation	Province of Ontario	90-016
Marshall, George		Conservation — Surface Collecting Only	Wentworth and Brant Counties	90-033
McNally, Robert H.		Conservation — Surface Collecting Only	Northwestern Ontario	90-003
Nisbet, Robert		Conservation — Surface Collecting Only	Province of Ontario	90-095 (inactive)
Pegg, Arthur	Corporation of County of Kent	Conservation	Camden/East Camden Twp, Kent County	90-073

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Peters, John H.	Ontario Hydro Land Use & Env Plng	Conservation — Surface Collecting Only	Province of Ontario	90-030
Pufahl, John K.	University of Windsor	Conservation — Surface Collecting Only	Northwestern Ontario	90-099
Ruddock, James		Conservation — Surface Collecting Only	Peterborough County	90-078
Sandmoen, Kevin		Conservation — Surface Collecting Only	Rainy River — Kenora District	90-102
Smyk, Dennis		Conservation — Surface Collecting Only	Northwestern Ontario	90-037
Warrack, Mark	City of Mississauga	Conservation — Surface Collecting Only	City of Mississauga	90-077
CONSULTING				
Adams, Nick	Adams Heritage Consultants	Consulting	Province of Ontario	90-027
Andreae, Chris	Historica Research Limited	Consulting — Industrial Arch	Province of Ontario	90-052 (inactive)
Arnold, Tom		Consulting	Province of Ontario	90-022
Arthurs, David	Datum-Point Archaeological Consultg	Consulting	Province of Ontario	90-039
Ball, Isobel		Consulting	Southern Ontario	90-059
Ballantine, Tom		Consulting	Southcentral & Eastern Ontario	90-065
Balmer, Ann	Algonquin Associates	Consulting	Province of Ontario	90-029
Brewer, Gary	#2-308	Consulting — Land & Underwater	Southeastern Ontario — L Ont/Erie	90-053
Conway, Thor	Heritage Discoveries Inc.	Consulting	Province of Ontario	90-080
Daechsel, Hugh		Consulting	Province of Ontario	90-055
Devereux, Helen		Consulting	Province of Ontario	90-109 (inactive)
Dibb, Gordon	York North Archaeological Services	Consulting	Southern Ontario	90-063
Gray, W. Barry	Cultural Resources Consultants	Consulting	Province of Ontario	90-025
Halverson, Colleen		Consulting	Northwestern Ontario	90-014
Hinshelwood, Andrew		Consulting	Northern Ontario	90-043
Jamieson, J. Bruce	Heritage Research	Consulting	Province of Ontario	90-040
Janusas, Scarlett	Regional Municipality of Waterloo	Consulting	Regional Municipality of Waterloo	90-032
Janusas, Scarlett	Scarlett Janusas & Associates Inc.	Consulting — Land & Underwater	Province of Ontario	90-031
Jouppien, Jon	J.K. Jouppien Heritage Res Consltnt	Consulting	Province of Ontario	90-103
Keatley, J. Owen	Ont. Archaeological Consulting Serv	Consulting	Province of Ontario	90-024
Knight, Dean	Arachaeological Research Associates	Consulting	Province of Ontario	90-045
Lennox, Paul	Ministry of Transportation	Consulting	Province of Ontario	90-026

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Mayer, Robert G.		Consulting	Province of Ontario	90-020 (inactive)
McKillop, Heather	Northeastern Archaeological Assoc.	Consulting	Province of Ontario	90-091
Michael, Rita	Hamilton-Wentworth Archaeological Assoc.	Consulting	Hamilton-Wentworth Region Only	90-089
Michael, Rita	Michael Archaeological Services	Consulting	Province of Ontario	90-088
Parker, L.R. Bud	Parker Archaeological Consulting	Consulting	Province of Ontario	90-114
Pastershank, Georgine		Consulting	Northwestern Ontario	90-069
Pearce, Robert J.	Museum of Indian Archaeology	Consulting	Province of Ontario	90-006
Pelleck, John		Consulting	Northwestern Ontario	90-068
Pollock, John	Settlement Surveys Ltd.	Consulting	Province of Ontario	90-017
Poulton, Dana	Mayer, Poulton & Associates Inc.	Consulting	Province of Ontario	90-019
Rajnovich, Grace		Consulting	Province of Ontario	90-079
Rusak, Jacqueline		Consulting	Northern Ontario	90-071
Stewart, Bruce		Consulting	Province of Ontario	90-100
Sutherland, Patricia		Consulting	Province of Ontario	90-112 (inactive)
Timmins, Peter		Consulting	Province of Ontario	90-108
Warrick, Gary A.	Ministry of Transportation	Consulting	Province of Ontario	90-018
Williamson, Ronald	Archaeological Services Inc.	Consulting	Province of Ontario	90-021
Wilson, Patricia	Peninsula Archaeology Consultants	Consulting — Stage 1 only	Province of Ontario	90-061 (inactive)
Woodley, Philip J.		Consulting	Province of Ontario	90-076
EXCAVATION				
Doroszenko, Dena	Ontario Heritage Foundation	Excavation	Barnum House, Haldimand Twp.	90-064
Ellis, Chris	University of Waterloo	Excavation	Crowfield Site, Middlesex Cty	90-057
Ellis, Chris	University of Waterloo	Excavation	Murphy Site, Mosa Twp/Middlesex Cty	90-086
Fortier, Paul	Stockade Barracks	Excavation	Stockade Barracks, Prescott	90-098
Gordon, Diana	McMaster University, Anthropology	Excavation	Lake Temagami, Nipissing, Tem. Distr	90-087 (inactive)
Halverson, Colleen		Excavation	Nestor Falls Site, Kenora District	90-104
Molnar, James		Excavation	Hunters Point, Bruce County	90-092
Muller, Joseph		Excavation	McLeod Site, Middlesex Cty	90-051 (inactive)
Pearce, Robert J.	Museum of Indian Archaeology	Excavation	Lawson Site, Middlesex County	90-008

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FIELD SCHOOL				
Burgar, Robert	Metro Toronto Conserv Authority	Field School	York University/ Seed-Barker Site	90-011
Burgar, Robert	Metro Toronto Conserv Authority	Field School	Boyd Conservation/ Seed-Barker Site	90-012
Hamalainen, Peter	Archaeological Resource Centre	Field School — Gore Vale	Trinity-Bellwoods Park — Toronto	90-072
Jamieson, Susan	Trent University	Field School	Moodie Homestead, Douro Twp	90-062
Knight, Dean	Wilfrid Laurier University	Excavation — Field School	Ball Site (BdGv-3) Medonte Twp	90-044
Latta, Martha		Field School	Auger Site (BdGw-3) Simcoe County	90-070
Sherman, Elise	Bruce County Board of Education	Field School	Mason Family Cabin Site, Amabel Twp	90-049
Triggs, John R.		Field School	Proudfoots Hollowp, Trafalgar Twp	90-090 (inactive)
SURVEY AND TEST EXCAVATION				
Ballantine, Tom		Survey/Test Excavation	Haliburton District	90-066
Burgar, Robert	Metro Toronto Conserv Authority	Survey/Test Excavation	Metro Conservation Area Only	90-013
Cleland, Charles	MSU Museum	Survey/Test Excavation	Algoma District	90-107
Ellis, Chris	University of Waterloo	Survey/Test Excavation	Middlesex County	90-058
Finlayson, William		Survey/Test Excavation	Crawford Lake Site	90-009
Finlayson, William		Survey/Test Excavation	Duffins & Petticoat Creek	90-010 (inactive)
Jackson, Lawrence	Northeastern Archaeological Assoc.	Survey/Test Excavation	Durham, Northumberland, Peterboro Cty	90-036
Junker-Andersen, Christien		Survey/Test Excavation	Lake Clydesdale, Peterborough Cty	90-110 (inactive)
Junker-Andersen, Christien		Survey/Test Excavation	Chandos Twp, Peterborough County	90-111 (inactive)
Kapches, Mima	Royal Ontario Museum New World Arch	Survey/Test Excavation	North York, Metropolitan Toronto	90-015
Mitchell, Barry		Survey/Test Excavation	Kant & Duquette Site — Renfrew Cty	90-001
Molnar, James		Survey/Test Excavation	Bruce County	90-042
Pearce, Robert	Museum of Indian Archaeology	Survey/Test Excavation	City of London and Middlesex County	90-007
Smardz, Karolyn	Archaeological Res Centre, Tor Bd	Survey/Test Excavation	City of Toronto	90-028
Storck, Peter L.	Royal Ontario Museum, New World Arch	Survey/Text Excavation	Province of Ontario	90-034
von Gernet, Alexander		Survey/Test Excavation	Lake Highland, Renfrew County	90-106
Webb, Catherine	Toronto Historical Board	Survey/Test Excavation	Historic Fort York — Toronto	90-041

Name	Company	Licence Type	Location	Number
UNDERWATER				
Cameron, Maureen		Underwater Survey	Flake Lake, Algoma/ Manitoulin Area	90-081 (inactive)
Cassavoy, Kenneth		Underwater Survey	HMS Speedy — Lake Ontario	90-002
Cassavoy, Kenneth	H.M.S. Speedy Foundation	Underwater Survey	HMS Speedy — Lake Ontario	90-067
Dowden, Charles	March Historical Society	Underwater Survey	Berry's Wharf, Ottawa River	90-116 (inactive)
Engelbert, Peter	Marine Heritage, MCC	Underwater Survey & Conservation	Province of Ontario	90-096
Johnston, Mike		Underwater Survey	Nimrod/Merida, Lake Erie	90-046
Kohl, Cris		Underwater Survey	Wexford Site, Lower Lake Huron	90-115
Lee, Tutty	Toronto Chpt Save Our Shipwrecks	Underwater Survey	Humber Bay, Lake Ontario	90-105
Mahon, Doug		Underwater Survey	Osborne — Lake Erie, Ontario	90-005
McLeod, Ken		Underwater Survey	The Rideau River	90-082
Paskert, James		Underwater Survey	HMS Commodore, Lake Erie	90-056
Pickering, Roy		Underwater Survey	Lake Erie — Off Point Aux Pins	90-094 (inactive)
Rule, Margaret	The Mary Rose Trust	Underwater Survey	Hamilton Scourge/ Lake Ontario	90-085

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INFORMATION FOR CONTRIBUTORS

The new series of the *Annual Archaeological Report, Ontario*, will be published in the fall following the year in which the work was completed. Manuscripts may be submitted in English or in French and should be typed double-spaced throughout, including the references. Reports from individuals may be up to 1500 words in length and those from consultants and institutions up to 2500 words. The report should be headed by an informative title and should also include the author's name, type of licence and licence number, and a full mailing address.

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